# EXHIBIT 61

Page 1

IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF NEW JERSEY

IN RE JOHNSON & JOHNSON )
TALCUM POWDER PRODUCTS )
MARKETING, SALES ) MDL NO.
PRACTICES, AND PRODUCTS ) 16-2738 (FLW) (LHG)
LIABILITY LITIGATION )

THIS DOCUMENT RELATES TO )
ALL CASES )

Saturday, January 19, 2019

Videotaped Deposition of ARCH I. "CHIP"
CARSON, M.D., Ph.D., held at the Marriott
Houston Medical Center, 6580 Fannin Street,
Houston, Texas, commencing at 9:02 a.m., on
the above date, before Michael E. Miller,
Fellow of the Academy of Professional
Reporters, Certified Court Reporter,
Registered Diplomate Reporter, Certified
Realtime Reporter and Notary Public.

GOLKOW LITIGATION SERVICES 877.370.DEPS | fax 917.591.5672 deps@golkow.com

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1 2	A P P E A R A N C E S: BEASLEY ALLEN, PC		1	INDEX		
3	BY: P. LEIGH O'DELL, ESQUIRE leigh.odell@beasleyallen.com		2	APPEARANCES	2	
4	MARGARET M. THOMPSON, ESQUIRE margaret.thompson@beasleyallen.com 234 Commerce Street		3 4	PROCEEDINGS	8	
5 6	Montgomery, Alabama 36103-4160 (334) 269-2343 Counsel for Plaintiffs' Steering		5	EXAMINATION OF ARCH	H I. "CHIP" CARS	ON, M.D., Ph.D.:
7	Committee		6	BY MR. ZELLERS	9	
8	BURNS CHAREST LLP BY: AMANDA KLEVORN, ESQUIRE aklevorn@burnscharest.com		7	BY MS. BOCKUS	284	
10	365 Canal Street Suite 1170 New Orleans, Louisiana 70130		8	BY MS. APPEL	343	
11	(504) 799-2845 Counsel for Plaintiffs		10	CERTIFICATE	364	
12 13	TUCKER ELLIS LLP BY: MICHAEL C. ZELLERS, ESQUIRE		11	ERRATA	366	
14	michael.zellers@tuckerellis.com 515 South Flower Street		12	ACKNOWLEDGMENT OF	F DEPONENT	367
15 16	42nd Floor Los Angeles, California 90071 (213) 430-3400		13	LAWYER'S NOTES	368	
17	Counsel for Johnson & Johnson Defendants		14 15			
18 19	DRINKER BIDDLE & REATH, LLP BY: KATHERINE MCBETH, ESQUIRE		16 17			
20	katherine.mcbeth@dbr.com One Logan Square, Suite 2000		18 19			
21	Philadelphia, Pennsylvania 19103 (215) 988-2706		20 21			
23	Counsel for Johnson & Johnson Defendants		22 23			
24			24			
		Page 3				Page 5
1 2	A P P E A R A N C E S: DYKEMA GOSSETT PLLC		1	DEPOSITION EXI ARCH I. "CHIP" CARS		
3	BY: JANE E. BOCKUS, ESQUIRE jbockus@dykema.com		2 3	January 19, 2019 NUMBER DESCRIP		
4	112 East Pecan Street Suite 1800 San Antonio, Texas 78205		4 5	Exhibit 1 Notice of Depositi Exhibit 2 11/16/18 Carson E		
5	(210) 554-5500 Counsel for Imerys Talc America		6	Report  Exhibit 3 Carson Curriculun	ı Vitae 21	
6 7	COUGHLIN DUFFY LLP		7	Exhibit 4 Listing of Literatur		
8	BY: JONATHAN F. DONATH, ESQUIRE jdonath@coughlinduffy.com		8 9	Reviewed Exhibit 5 2019 Longo et al	26	
9	350 Mount Kemble Avenue Morristown, New Jersey 07962 (973) 267-0058		10	Publication	24	
10 11	Counsel for Imerys Talc America		11 12	Exhibit 6 2019 Fletcher et al Publication Exhibit 7 Undated Taher et a		
12	TUCKER ELLIS LLP BY: CAROLINE M. TINSLEY, ESQUIRE		13	Publication		
13 14	caroline.tinsley@tuckerellis.com 100 South Fourth Street, Suite 600 St. Louis, MO 63102		14	Exhibit 8 1952 Graham et al Publication		
15	(216) 696-3675 Counsel for PTI Royston LLC and PTI		15	Exhibit 9 12/18 Health Cana Screening Assessment		
16	Union LLC		16 17	Exhibit 10 1/1/14 FDA Lette Epstein	r to 31	
17 18	SEYFARTH SHAW, LLP BY: RENEE B. APPEL, ESQUIRE rappel@seyfarth.com		18	Exhibit 11 1991 Blount et al Publication	32	
19	975 F Street, N.W. Washington, D.C. 20004-1454		19	Exhibit 12 1974 Parmley et a	ıl 32	
20 21	(202) 463-2400 Counsel for Personal Care Products		20 21	Publication Exhibit 13 USB Drive Conta Materials Reviewed	ining 36	
22	VIDEOGRAPHER:		22	Exhibit 14 8/1/00 Health Car	nada 98	
23	DOUG OVERSTREET,		23	Decision-Making Fran		

2 (Pages 2 to 5)

Arch I. "Chip" Carson, M.D., Ph.D.

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1	DEPOSITION EXHIBITS	1	PROCEEDINGS
2	DEI OSITION EXHIBITS		
	Exhibit 15 Handwritten List of 124	2	(January 19, 2019 at 9:02 a.m.)
3	Materials Reviewed by Dr. Carson	3	THE VIDEOGRAPHER: We are now
4	Di. Cuison	4	on the record. My name is Doug
_	Exhibit 16 1979 Chappell et al 130	5	Overstreet. I'm the videographer for
5 6	Publication Exhibit 17 2011 Reid et al Publication 159	6	Golkow Litigation Services. Today is
7	Exhibit 18 2011 Camargo et al 163	7	January 19th, 2019. The time is
	Publication	8	9:02 a.m.
8	Exhibit 19 2013 Terry et al 192	9	This video deposition is being
9	Publication	10	held in Houston, Texas in the matter
10	Exhibit 20 2016 Cramer et al 195	11	of Talcum Powder Litigation MDL
11	Publication	12	No. 2738.
	Exhibit 21 IARC Classification Groups 225	13	The deponent is Dr. Chip
12 13	Document Exhibit 22 2017 Power et al. 242	14	
13	Exhibit 22 2017 Berge et al 243 Publication 243		Carson.
14		15	Will counsel please identify
15	Exhibit 23 2007 Langseth et al 247 Publication	16	themselves for the record.
16	Exhibit 24 2016 Schildkraut et al 271	17	MS. O'DELL: Leigh O'Dell,
	Publication	18	Beasley Allen, for the plaintiffs.
17	Exhibit 25 Excerpt from IARC 289	19	DR. THOMPSON: Margaret
18	Monograph 93	20	Thompson, Beasley Allen, for the
19		21	plaintiffs.
20 21		22	MS. KLEVORN: Amanda Klevorn,
22		23	Burns Charest, for the plaintiffs.
23		24	MR. ZELLERS: Michael Zellers
24			MIN EBBEERS. Michael Benefs
	Page 7		Page 9
1	REFERENCED EXHIBITS	1	for the Johnson & Johnson defendants.
2			
		2	MS. McBETH: Katherine McBeth,
	NUMBER PAGE	2 3	MS. McBETH: Katherine McBeth, Drinker Biddle & Reath, for the
3			•
	Exhibit 148	3	Drinker Biddle & Reath, for the Johnson & Johnson defendants as well.
4	Exhibit 148 Hopkins-28	3 4 5	Drinker Biddle & Reath, for the Johnson & Johnson defendants as well. MS. BOCKUS: Jane Bockus for
	Exhibit	3 4 5 6	Drinker Biddle & Reath, for the Johnson & Johnson defendants as well.  MS. BOCKUS: Jane Bockus for Imerys.
4	Exhibit 148 Hopkins-28	3 4 5 6 7	Drinker Biddle & Reath, for the Johnson & Johnson defendants as well. MS. BOCKUS: Jane Bockus for Imerys. MR. DONATH: Jonathan Donath
4 5	Exhibit	3 4 5 6 7 8	Drinker Biddle & Reath, for the Johnson & Johnson defendants as well. MS. BOCKUS: Jane Bockus for Imerys. MR. DONATH: Jonathan Donath from Coughlin Duffy for Imerys.
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4 5 6 7 8	Exhibit	3 4 5 6 7 8 9	Drinker Biddle & Reath, for the Johnson & Johnson defendants as well. MS. BOCKUS: Jane Bockus for Imerys. MR. DONATH: Jonathan Donath from Coughlin Duffy for Imerys. MS. APPEL: Renée Appel from Seyfarth Shaw for Personal Care
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4 5 6 7 8 9 10 11 12 13 14 15 16 17	Exhibit	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Drinker Biddle & Reath, for the Johnson & Johnson defendants as well.  MS. BOCKUS: Jane Bockus for Imerys.  MR. DONATH: Jonathan Donath from Coughlin Duffy for Imerys.  MS. APPEL: Renée Appel from Seyfarth Shaw for Personal Care Products.  MS. TINSLEY: Caroline Tinsley, Tucker Ellis, for PTI Union, LLC and PTI Royston, LLC.  THE VIDEOGRAPHER: The court reporter today is Mr. Mike Miller, and he will now swear in the witness.  ARCH I. "CHIP" CARSON, M.D., Ph.D., having been duly sworn,
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Exhibit	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Drinker Biddle & Reath, for the Johnson & Johnson defendants as well.  MS. BOCKUS: Jane Bockus for Imerys.  MR. DONATH: Jonathan Donath from Coughlin Duffy for Imerys.  MS. APPEL: Renée Appel from Seyfarth Shaw for Personal Care Products.  MS. TINSLEY: Caroline Tinsley, Tucker Ellis, for PTI Union, LLC and PTI Royston, LLC.  THE VIDEOGRAPHER: The court reporter today is Mr. Mike Miller, and he will now swear in the witness.  ARCH I. "CHIP" CARSON, M.D., Ph.D., having been duly sworn, testified as follows:
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Exhibit	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Drinker Biddle & Reath, for the Johnson & Johnson defendants as well.  MS. BOCKUS: Jane Bockus for Imerys.  MR. DONATH: Jonathan Donath from Coughlin Duffy for Imerys.  MS. APPEL: Renée Appel from Seyfarth Shaw for Personal Care Products.  MS. TINSLEY: Caroline Tinsley, Tucker Ellis, for PTI Union, LLC and PTI Royston, LLC.  THE VIDEOGRAPHER: The court reporter today is Mr. Mike Miller, and he will now swear in the witness.  ARCH I. "CHIP" CARSON, M.D., Ph.D., having been duly sworn, testified as follows: EXAMINATION
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Exhibit	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Drinker Biddle & Reath, for the Johnson & Johnson defendants as well.  MS. BOCKUS: Jane Bockus for Imerys.  MR. DONATH: Jonathan Donath from Coughlin Duffy for Imerys.  MS. APPEL: Renée Appel from Seyfarth Shaw for Personal Care Products.  MS. TINSLEY: Caroline Tinsley, Tucker Ellis, for PTI Union, LLC and PTI Royston, LLC.  THE VIDEOGRAPHER: The court reporter today is Mr. Mike Miller, and he will now swear in the witness.  ARCH I. "CHIP" CARSON, M.D., Ph.D., having been duly sworn, testified as follows: EXAMINATION BY MR. ZELLERS:
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Exhibit	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Drinker Biddle & Reath, for the Johnson & Johnson defendants as well.  MS. BOCKUS: Jane Bockus for Imerys.  MR. DONATH: Jonathan Donath from Coughlin Duffy for Imerys.  MS. APPEL: Renée Appel from Seyfarth Shaw for Personal Care Products.  MS. TINSLEY: Caroline Tinsley, Tucker Ellis, for PTI Union, LLC and PTI Royston, LLC.  THE VIDEOGRAPHER: The court reporter today is Mr. Mike Miller, and he will now swear in the witness.  ARCH I. "CHIP" CARSON, M.D., Ph.D., having been duly sworn, testified as follows: EXAMINATION BY MR. ZELLERS: Q. Can you state your name,
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Exhibit	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Drinker Biddle & Reath, for the Johnson & Johnson defendants as well.  MS. BOCKUS: Jane Bockus for Imerys.  MR. DONATH: Jonathan Donath from Coughlin Duffy for Imerys.  MS. APPEL: Renée Appel from Seyfarth Shaw for Personal Care Products.  MS. TINSLEY: Caroline Tinsley, Tucker Ellis, for PTI Union, LLC and PTI Royston, LLC.  THE VIDEOGRAPHER: The court reporter today is Mr. Mike Miller, and he will now swear in the witness.  ARCH I. "CHIP" CARSON, M.D., Ph.D., having been duly sworn, testified as follows: EXAMINATION BY MR. ZELLERS:

3 (Pages 6 to 9)

	Page 10		Page 12
1	A. Arch Carson.	1	BY MR. ZELLERS:
2	Q. You are a physician; is that	2	Q. As best we can, let me finish
3	right?	3	my question before you start to give your
4	A. I am.	4	answer. I'll do the same and allow you to
5	Q. A medical toxicologist?	5	finish your answer before I ask you another
6	A. Yes.	6	question so our court reporter can take down
7	Q. We are here today to take your	7	what each of us say.
8	deposition in the talc MDL litigation	8	Can you do that?
9	proceedings; is that right?	9	A. Yes.
10	A. As far as I know, yes.	10	Q. In response to the notice of
11	Q. You are an expert witness for	11	deposition, which we've marked as Exhibit 1,
12	the plaintiffs in that litigation; is that	12	have you brought with you certain documents
13	right?	13	here today?
14	A. Yes.	14	A. I have a collection of
15	Q. Did you receive a notice of	15	documents that in part respond to these
16	deposition, which we'll mark as Exhibit 1, to	16	requests, yes.
17	appear here today?	17	Q. Do you have any documents in
18	(Carson Deposition Exhibit 1	18	your possession that are responsive to the
19	marked.)	19	notice of deposition, Exhibit 1, that you
20	A. Yes, I received a copy of this	20	have not brought here today?
21	document.	21	A. I would have to go through
22	MS. O'DELL: And, Michael, just	22	these things one by one, but
23	for the record, we just reassert all	23	Q. You didn't do that before we
24	our previously served objections to	24	came here today?
	our previously served objections to		came here today.
	Page 11		Page 13
1	the notice.	1	A. I did, but the plaintiffs'
2	MR. ZELLERS: Thank you.	2	attorneys
3	BY MR. ZELLERS:	3	MS. O'DELL: Let me just stop
4	Q. You have given deposition	4	you, Dr. Carson, just because
5	testimony in the past; is that right?	5	discussing what we've discussed is not
6	A. I have.	6	within the purview of this deposition.
7	Q. On how many occasions?	7	That's privileged. Let me just say
8	A. Probably 30, 35.	8	THE WITNESS: All right.
9	Q. You are familiar with the	9	MS. O'DELL: Dr. Carson, in
10	procedures we're going to follow today?	10	response to the notice, has brought
11	A. More or less, I think.	11	with him copies of the cited materials
12	Q. If at any time I ask you a	12	in his report, and that's in the
13	question and you don't understand it, tell me	13	binder that is to his left.
14	you don't understand it and I'll repeat it or	14	He's brought with him copies of
15	rephrase it to try to make it clear to you.	15	certain documents that were listed on
16	Can you do that?	16	his materials considered list. He
17	A. Yes.	17	doesn't have a physical copy of
18	Q. If you answer a question that I	18	everything on his materials considered
19	ask or that any of the counsel ask, we're	19	list.
20	going to assume that you understood it; is	20	I brought today a thumb drive
21	that fair?	21	that has a copy of all the items on
22	MS. O'DELL: Object to form.	22	his materials considered list. If you
23	A. That's fair.	23	would like access to that, it's
24	///	24	available to you.

Page 14	
	Page 16
1 And then in addition, he has 1 Q. I'	ll ask you about the
· · · · · · · · · · · · · · · · · · ·	ts in a moment.
	pes this report,
	Exhibit 2, contain all of the
	nat you intend to offer at any
	uring of this matter?
	n general, it contains all of
	ns. I expect to expand on those
	ossibly in this deposition or in
not sent us an invoice. That's why we 10 the future.	
	oday's my opportunity to ask
	your opinions are in this matter.
	s of today, are the opinions
	spressed to us set forth at any
	aring in this matter, are they
	in your report, Exhibit 2?
17 you're welcome to it. 17 A. I	have seen information that
	e available recently that I did not
19 Q. Dr. Carson, you heard 19 have at tha	at time this report was finalized,
20 Ms. O'Dell describe what you brought here 20 and I have	modified my opinions very slightly
21 today. Is all of that accurate? 21 as a result	of that information.
22 A. It is. 22 Q. H	Iow have you modified your
Q. Are you aware of there being 23 opinions?	
24 any documents or materials that are 24 A. M	My opinions have essentially
Page 15	Page 17
1 responsive to the deposition notice that you 1 been stren	gthened as they relate to the
	question between perineal talcum
3 A. No. 3 powder us	se and the occurrence of ovarian
4 Q. I'm trying to understand what 4 cancers.	
	Other than you believing that
	ions are strengthened with respect
	ociation between perineal talcum
	se and ovarian cancer, have your
	changed at all since you prepared
	rt, Exhibit 2?
1	No.
1	Are there any new or additional
	as of today that you expect to
	at trial or any hearing of this
	ner than your report, Exhibit 2, and
	we qualified that report by stating
·	opinions on association are
	IS. O'DELL: Object to the
Q. Is Deposition Exhibit 2 your 21 form.	ZEI I EDÇ.
21 Q. Is Deposition Exhibit 2 your 21 form. 22 report in this matter? 22 BY MR. 2	ZELLERS:
21Q. Is Deposition Exhibit 2 your21form.22report in this matter?22BY MR. Z23A. It is. It also has23Q. Q	ZELLERS: Okay. Your report has a list ces that begin on page 11.

		1	
	Page 18		Page 20
1	Do you see that?	1	I produced a report that I
2	A. Yes.	2	thought was responsive to the question that
3	Q. What are the references? What	3	was given to me by the plaintiffs' attorneys,
4	do they relate to? And by that, I mean	4	and within that report I felt it necessary to
5	I'm just trying to understand what this list	5	cite specific key references that contributed
6	is.	6	to items in that report.
7	A. This is a list of references	7	BY MR. ZELLERS:
8	from which I gleaned information that were	8	Q. And those are
9	important to my forming opinions regarding	9	MS. O'DELL: Excuse me, sir.
10	the question that was given to me, and they	10	Are you finished, Dr. Carson?
11	contribute to pieces of the report in various	11	THE WITNESS: Yes.
12	ways.	12	MS. O'DELL: Okay. Sorry.
13	They don't represent a complete	13	BY MR. ZELLERS:
14	review that I made in preparing my report,	14	Q. Those are the items that you've
15	but all are important in some way in terms of	15	listed under References; is that right?
16	coming to my conclusions.	16	A. Yes.
17	Q. Are the references that you	17	Q. Literature are other materials
18	list in your report from page 11 up and	18	that you have reviewed but didn't rise to the
19	through page 16, are those the materials that	19	level of you citing them as a reference for
20	you are relying on in terms of your opinions	20	your report, correct?
21	that you're expressing in your report?	21	A. That is correct, but they do
22	MS. O'DELL: Objection to form.	22	contribute information that I utilize in
23	A. Yes.	23	terms of the whole to formulate my opinions.
24	///	24	Q. Let me mark several of the
	Page 19		Page 21
1	Page 19 BY MR. ZELLERS:	1	Page 21 attachments to your report as separate
1 2		1 2	
	BY MR. ZELLERS:		attachments to your report as separate
2	BY MR. ZELLERS: Q. What, then, is the difference between the references to your report and Exhibit B, which has a caption, Literature?	2	attachments to your report as separate exhibits.
2 3	BY MR. ZELLERS: Q. What, then, is the difference between the references to your report and	2 3	attachments to your report as separate exhibits.  (Carson Deposition Exhibit 3 marked.) BY MR. ZELLERS:
2 3 4	BY MR. ZELLERS: Q. What, then, is the difference between the references to your report and Exhibit B, which has a caption, Literature?	2 3 4	attachments to your report as separate exhibits.  (Carson Deposition Exhibit 3 marked.)
2 3 4 5	BY MR. ZELLERS: Q. What, then, is the difference between the references to your report and Exhibit B, which has a caption, Literature? A. The Exhibit B represents a larger set of documents, including scientific literature, technical reports, and so forth	2 3 4 5	attachments to your report as separate exhibits.  (Carson Deposition Exhibit 3 marked.) BY MR. ZELLERS:
2 3 4 5 6	BY MR. ZELLERS: Q. What, then, is the difference between the references to your report and Exhibit B, which has a caption, Literature? A. The Exhibit B represents a larger set of documents, including scientific	2 3 4 5 6	attachments to your report as separate exhibits.  (Carson Deposition Exhibit 3 marked.)  BY MR. ZELLERS:  Q. Exhibit 3 is your curriculum
2 3 4 5 6 7	BY MR. ZELLERS: Q. What, then, is the difference between the references to your report and Exhibit B, which has a caption, Literature? A. The Exhibit B represents a larger set of documents, including scientific literature, technical reports, and so forth that I reviewed in preparation of my report and the formation of my opinions; but they	2 3 4 5 6 7	attachments to your report as separate exhibits.  (Carson Deposition Exhibit 3 marked.)  BY MR. ZELLERS: Q. Exhibit 3 is your curriculum vitae that was attached to your report; is that right?  A. Yes.
2 3 4 5 6 7 8 9	BY MR. ZELLERS:  Q. What, then, is the difference between the references to your report and Exhibit B, which has a caption, Literature?  A. The Exhibit B represents a larger set of documents, including scientific literature, technical reports, and so forth that I reviewed in preparation of my report and the formation of my opinions; but they did not contain information that I felt	2 3 4 5 6 7 8 9	attachments to your report as separate exhibits.  (Carson Deposition Exhibit 3 marked.)  BY MR. ZELLERS: Q. Exhibit 3 is your curriculum vitae that was attached to your report; is that right?  A. Yes.  (Carson Deposition Exhibit 4
2 3 4 5 6 7 8	BY MR. ZELLERS:  Q. What, then, is the difference between the references to your report and Exhibit B, which has a caption, Literature?  A. The Exhibit B represents a larger set of documents, including scientific literature, technical reports, and so forth that I reviewed in preparation of my report and the formation of my opinions; but they did not contain information that I felt necessary to cite in my report.	2 3 4 5 6 7 8	attachments to your report as separate exhibits.  (Carson Deposition Exhibit 3 marked.)  BY MR. ZELLERS: Q. Exhibit 3 is your curriculum vitae that was attached to your report; is that right?  A. Yes.  (Carson Deposition Exhibit 4 marked.)
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	Arch 1. Chip Ca		
	Page 22		Page 24
1	Today, when I refer to	1	binder of materials; is that right?
2	products, talc products, baby powder or	2	A. Yes.
3	Shower to Shower, I'm referring to the baby	3	Q. The binder of materials, did
4	powder product manufactured by Johnson &	4	you prepare that, or was it prepared for you?
5	Johnson Consumer Products Inc. and the Shower	5	A. Well, I uploaded documents to a
6	to Shower product formerly manufactured by	6	share file, and the plaintiffs' attorneys
7	Johnson & Johnson Consumer Products Inc.	7	were kind enough to print those for me and
8	Do you understand that?	8	assemble them in the binder.
9	A. Yes.	9	Q. In addition, you have brought
10	Q. Is your report, Exhibit 2,	10	with you a stack of eight or so additional
11	accurate?	11	references that you have on the table in
12	A. I believe so.	12	front of you; is that right?
13	Q. Do you believe it's complete?	13	A. Yes.
14	A. In terms of its focus, yes.	14	Q. Are those materials that were
15	Q. What do you mean in terms of	15	cited either as references in your report or
16	its focus?	16	in the literature section of your report?
17	A. It covers specific aspects of a	17	A. I think they're all included in
18	larger question, and regarding those specific	18	one or the other of those lists.
19	aspects, I believe it is complete.	19	Q. Your testimony under oath is
20	Q. It covers the aspects of the	20	that all of the additional materials you
21	question that you intend to offer opinions	21	brought here today are referred to either in
22	on, correct?	22	your reference list, which is begins at
23	A. That is correct.	23	page 11 of your report, or your literature
24	Q. What is the question that was	24	list, which we've marked as Exhibit 4 and is
	Q and the question than the		ist, which we've marked as Exhibit 1 and is
	Page 23		Page 25
1	given to you by counsel for plaintiffs in	1	Exhibit B to your report; is that right?
2	this litigation?	2	MS. O'DELL: Objection to the
3	A. The question is do the does	3	form.
4	the habitual use of talcum powder products	4	Go ahead.
5	cause ovarian cancer.	5	A. There are a couple of new
6	Q. Were you given any other	6	articles here that were not available at the
7	questions to answer or opine on in this	7	time that I submitted my report, and I
8	litigation?	8	believe the literature list was also created.
9	A. Not specifically.	9	BY MR. ZELLERS:
10	Q. What do you understand habitual	10	Q. Were those new materials
11	use of talcum powder to refer to?	11	provided to you by plaintiffs' counsel or are
12	A. It means routine use, periodic	12	those materials that you did some type of
13	use.	13	literature search and found?
14	Q. Over any period of time?	14	A. One of them was provided to me
15	A. Over an extended period of	15	by plaintiffs' counsel, but I was aware that
16	time.	16	it was coming. And actually, two of them
17	Q. What is an extended period of	17	were provided by plaintiffs' counsel.
18	time?	18	Q. All right. The two additional
19	A. Months or years.	19	documents that were provided to you by
20	Q. Any other definition that you	20	plaintiffs' counsel, can you show those to
21	have of habitual use?	21	me?
22	A. No.	22	A. Okay. One is the Longo report.
23	Q. Today, in response to the	23	Q. We will mark as
	matica of democition was did being the	24	Deposition Exhibit 5 the Longo report dated
24	notice of deposition, you did bring the	44	Deposition Exhibit 3 the Longo report dated

		1	
	Page 26		Page 28
1	January 15th of 2009 [sic].	1	Ph.D.; is that right?
2	(Carson Deposition Exhibit 5	2	A. Yes.
3	marked.)	3	Q. What additional articles have
4	A. The other is the recent	4	you brought here with you today separate and
5	Fletcher, et al article.	5	apart from your binder of materials?
6	(Carson Deposition Exhibit 6	6	A. There's a copy of the IARC
7	marked.)	7	monographs preamble.
8	BY MR. ZELLERS:	8	Q. For what purpose did you bring
9	Q. The Fletcher article dated	9	that article?
10	January 3rd of 2019 we'll mark as Exhibit 6.	10	A. This discusses the general
11	This is an article from Reproductive	11	process that IARC uses in approaching a
12	Sciences; is that right?	12	putative carcinogenic material.
13	A. Yes. And I actually have a	13	Q. That has previously been marked
14	third.	14	as Plaintiff Exhibit P-346 in another
15	Q. All right. You have a third	15	proceeding; is that right?
16	article that was provided to you by	16	A. I don't know.
17	plaintiffs' counsel?	17	Q. Well, the document we're
18	A. Yes.	18	looking at has that exhibit sticker on it; is
19	(Carson Deposition Exhibit 7	19	that right?
20	marked.)	20	A. It does.
21	BY MR. ZELLERS:	21	Q. What else have you brought here
22	Q. Let's mark that as	22	with you today?
23	Deposition Exhibit 7. Can you tell us what	23	A. This is an article from
24	article that is?	24	The Lancet from 1952 titled Value of Modified
	Page 27		Page 29
1	A. This is a meta-analysis.	1	Starch as a Substitute for Talc, and the
2	It's the title is Systematic Review and	1 ^	a
	<b>3</b>	2	first author is J.D.P. Graham.
3	Meta-Analysis of the Association Between	3	first author is J.D.P. Graham.  Q. Why did you bring that article?
3 4			
	Meta-Analysis of the Association Between	3	Q. Why did you bring that article?
4	Meta-Analysis of the Association Between Perineal Use of Talc and Risk of Ovarian	3 4	<ul><li>Q. Why did you bring that article?</li><li>A. This is an older article that</li></ul>
4 5	Meta-Analysis of the Association Between Perineal Use of Talc and Risk of Ovarian Cancer. The lead author is Mohamed Taher. Q. The Taher paper we have marked as Exhibit 7; is that right?	3 4 5	<ul><li>Q. Why did you bring that article?</li><li>A. This is an older article that discusses the suitability of substituting</li></ul>
4 5 6 7 8	Meta-Analysis of the Association Between Perineal Use of Talc and Risk of Ovarian Cancer. The lead author is Mohamed Taher. Q. The Taher paper we have marked as Exhibit 7; is that right? A. Yes.	3 4 5 6	Q. Why did you bring that article? A. This is an older article that discusses the suitability of substituting cornstarch materials for talc due to perceived issues with talc. Q. Is this an article that you had
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	Page 30		Page 32
1	binder of materials?	1	talcum powder and ovarian cancer, is
2	A. I have here a copy of the	2	something that you undertook when you were
3	recent Canadian position on the safety of	3	retained by plaintiffs' counsel and asked to
4	talcum powder and its relationship to ovarian	4	address the question they gave to you?
5	cancer.	5	A. Yes, it is.
6	Q. When did you review that	6	Q. We will mark the article by
7	document?	7	Blount as Exhibit 11.
8	A. A couple weeks ago, I think.	8	(Carson Deposition Exhibit 11
9	Q. Is that a document that you	9	marked.)
10	were provided by plaintiffs' counsel?	10	BY MR. ZELLERS:
11	A. It was.	11	Q. And you have one more; is that
12		12	right?
13	*		•
	We'll mark the draft screening assessment	13	A. Yes, one more, which is this
14	from Health Canada dated December 18th of	14	is an article from the American Journal of
15	2018 as Exhibit 9.	15	Obstetrics and Gynecology from 1974 titled
16	(Carson Deposition Exhibit 9	16	The Ovarian Mesothelioma. It's authored by
17	marked.)	17	Parmley and Woodruff.
18	BY MR. ZELLERS:	18	Q. We'll mark that as Exhibit 12.
19	Q. Any other documents?	19	(Carson Deposition Exhibit 12
20	A. I have a copy of the letter	20	marked.)
21	from the FDA from April 1st, 2014 responding	21	BY MR. ZELLERS:
22	to positions petitions for labeling.	22	Q. Exhibit 12, is this an article
23	Q. This is a letter that has a	23	that was cited previously by you in either
24	stamp on it on the first page, April 1st,	24	your references or your literature list?
	Page 31		Page 33
1	Page 31 2014, from or strike that to	1	Page 33 A. Yes.
1 2		1 2	
	2014, from or strike that to		<ul><li>A. Yes.</li><li>Q. For what strike that.</li></ul>
2	2014, from or strike that to Dr. Epstein from the FDA; is that right?	2	<ul><li>A. Yes.</li><li>Q. For what strike that.</li><li>Is this a document that you</li></ul>
2	2014, from or strike that to Dr. Epstein from the FDA; is that right? A. Yes. Q. Let's mark that as Exhibit 10.	2 3	A. Yes. Q. For what strike that. Is this a document that you chose to bring today or were you provided it
2 3 4	2014, from or strike that to Dr. Epstein from the FDA; is that right? A. Yes. Q. Let's mark that as Exhibit 10. (Carson Deposition Exhibit 10	2 3 4	A. Yes. Q. For what strike that. Is this a document that you chose to bring today or were you provided it by plaintiffs' counsel?
2 3 4 5	2014, from or strike that to Dr. Epstein from the FDA; is that right? A. Yes. Q. Let's mark that as Exhibit 10. (Carson Deposition Exhibit 10 marked.)	2 3 4 5	A. Yes. Q. For what strike that. Is this a document that you chose to bring today or were you provided it by plaintiffs' counsel? A. This is another one I ran
2 3 4 5 6	2014, from or strike that to Dr. Epstein from the FDA; is that right? A. Yes. Q. Let's mark that as Exhibit 10. (Carson Deposition Exhibit 10 marked.) BY MR. ZELLERS:	2 3 4 5 6	A. Yes. Q. For what strike that. Is this a document that you chose to bring today or were you provided it by plaintiffs' counsel? A. This is another one I ran across last night and decided to bring along
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	Page 34		Page 36
1	brought here with you today are documents	1	wouldn't be able to tell you for sure. I'm
2	that you wanted to have available to try to	2	sure I ran across these in my own literature
3	respond to the questions that I may ask you?	3	sarch.
3 4	A. Yes.		
		4	Q. Deposition Exhibit 13, we will
5	Q. These documents you all	5	mark the thumb drive that plaintiffs' counsel
6	believe strike that.	6	has brought here today.
7	The documents that you've	7	(Carson Deposition Exhibit 13
8	identified and you've brought with you	8	marked.)
9	have brought with you today, you believe	9	BY MR. ZELLERS:
10	those are supportive of the opinions that you	10	Q. Do you, Dr. Carson, have an
11	are rendering in this matter; is that right?	11	understanding of what's on the thumb drive
12	A. Yes.	12	we've marked as Exhibit 13?
13	Q. The documents on your	13	A. My understanding is this is
14	literature list, what we have marked as	14	copies of the documents on the literature
15	Exhibit 4, are those documents that were	15	list.
16	provided to you by plaintiffs' counsel?	16	Q. When were you first retained by
17	A. Some were.	17	anyone regarding the talc/ovarian cancer
18	Q. The documents on this list that	18	litigation?
19	were not provided by plaintiffs' counsel, did	19	A. In October of 2018.
20	you find those through a literature search?	20	Q. Who contacted you?
21	A. Yes.	21	A. I was contacted by an attorney
22	Q. Are you able to distinguish for	22	named Russ Abney.
23	us which documents on your literature list,	23	Q. Who is Mr. Abney, if you know?
24	Exhibit 4, came from plaintiffs' counsel and	24	A. Mr. Abney is a lawyer who used
	Page 35		Page 37
1	which items on the literature list you came	1	to work in the Houston area and with whom I
2	up with?	2	had some dealings years ago; and since that
3	A. To some extent.		
	A. To some extent.	3	time he has become involved in this talc
4	Q. So if we went through item by	3 4	time he has become involved in this talc litigation in some way, was aware of me as a
4 5			
	Q. So if we went through item by	4	litigation in some way, was aware of me as a
5	Q. So if we went through item by item, you believe you could distinguish	4 5	litigation in some way, was aware of me as a potential expert witness, and contacted me
5 6	Q. So if we went through item by item, you believe you could distinguish between what was provided to you by	4 5 6	litigation in some way, was aware of me as a potential expert witness, and contacted me regarding my interest and availability.  Q. What matters have you worked on with Mr. Abney in the past?
5 6 7	Q. So if we went through item by item, you believe you could distinguish between what was provided to you by plaintiffs and what you found on your own?	4 5 6 7	litigation in some way, was aware of me as a potential expert witness, and contacted me regarding my interest and availability.  Q. What matters have you worked on with Mr. Abney in the past?  A. I think it would have been back
5 6 7 8	Q. So if we went through item by item, you believe you could distinguish between what was provided to you by plaintiffs and what you found on your own?  A. For some, but not all of them.  Q. Have you reviewed all of the materials that are listed on your literature	4 5 6 7 8	litigation in some way, was aware of me as a potential expert witness, and contacted me regarding my interest and availability.  Q. What matters have you worked on with Mr. Abney in the past?  A. I think it would have been back in the 1990s, and I frankly don't recall what
5 6 7 8 9	Q. So if we went through item by item, you believe you could distinguish between what was provided to you by plaintiffs and what you found on your own?  A. For some, but not all of them.  Q. Have you reviewed all of the	4 5 6 7 8 9	litigation in some way, was aware of me as a potential expert witness, and contacted me regarding my interest and availability.  Q. What matters have you worked on with Mr. Abney in the past?  A. I think it would have been back
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5 6 7 8 9 10 11 12	Q. So if we went through item by item, you believe you could distinguish between what was provided to you by plaintiffs and what you found on your own?  A. For some, but not all of them.  Q. Have you reviewed all of the materials that are listed on your literature list?  A. I have reviewed all of them,	4 5 6 7 8 9 10 11	litigation in some way, was aware of me as a potential expert witness, and contacted me regarding my interest and availability.  Q. What matters have you worked on with Mr. Abney in the past?  A. I think it would have been back in the 1990s, and I frankly don't recall what cases we worked on, but there were one or maybe two cases.
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5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Q. So if we went through item by item, you believe you could distinguish between what was provided to you by plaintiffs and what you found on your own?  A. For some, but not all of them. Q. Have you reviewed all of the materials that are listed on your literature list?  A. I have reviewed all of them, yes. Q. Have you reviewed all of the materials that are on your reference list? A. Yes. Q. The materials on your reference list, is it the same that some were provided to you by plaintiffs' counsel and some you found on your own?	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	litigation in some way, was aware of me as a potential expert witness, and contacted me regarding my interest and availability.  Q. What matters have you worked on with Mr. Abney in the past?  A. I think it would have been back in the 1990s, and I frankly don't recall what cases we worked on, but there were one or maybe two cases.  Q. When in October of 2018 were you contacted by Mr. Abney?  MS. O'DELL: Object to the form.  A. I believe it was either the 14th or 15th of October.  BY MR. ZELLERS:  Q. How do you remember with that
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5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Q. So if we went through item by item, you believe you could distinguish between what was provided to you by plaintiffs and what you found on your own?  A. For some, but not all of them. Q. Have you reviewed all of the materials that are listed on your literature list?  A. I have reviewed all of them, yes. Q. Have you reviewed all of the materials that are on your reference list? A. Yes. Q. The materials on your reference list, is it the same that some were provided to you by plaintiffs' counsel and some you found on your own?  A. I think there may be one or two references that I didn't have before I saw	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	litigation in some way, was aware of me as a potential expert witness, and contacted me regarding my interest and availability.  Q. What matters have you worked on with Mr. Abney in the past?  A. I think it would have been back in the 1990s, and I frankly don't recall what cases we worked on, but there were one or maybe two cases.  Q. When in October of 2018 were you contacted by Mr. Abney?  MS. O'DELL: Object to the form.  A. I believe it was either the 14th or 15th of October.  BY MR. ZELLERS:  Q. How do you remember with that precision?  A. I have an e-mail that relates

	Page 38		Page 40
1	Q. Mr. Abney at some point asked	1	doing a review? What does that mean?
2	you to address the question that you told us	2	A. Well, I felt that I was hired
3	before: Does the habitual use of talcum	3	as a witness at that point and that's when I
4	powder cause ovarian cancer?	4	would begin my billable hours on this case.
5	Is that right?	5	Q. When was that? Sometime in
6	MS. O'DELL: Object to the	6	later October of late October of 2018?
7	form.	7	
			A. It was within a few days after
8	A. Well, he talked to me generally	8	our first meeting, still in October.
9	about the case that was proceeding, and I	9	Q. What did you do to answer the
10	discussed with him what my understanding of	10	question? What was your methodology?
11	those things was and what the kind of	11	A. Well, initially I decided to do
12	opinions I would be able to render would be.	12	a general literature search on the question
13	And he suggested that he set up a meeting	13	to see what research had been performed, what
14	between me and members of plaintiffs'	14	reports had been written, what the quality of
15	counsel.	15	that research was.
16	BY MR. ZELLERS:	16	Q. When did you start that?
17	Q. When Mr. Abney called you	17	A. Immediately. I was curious.
18	middle of October of 2018, talcum powder and	18	I began to assemble the
19	any relationship or association that it may	19	available literature and review it on a
20	have to ovarian cancer had not been a focus	20	piecemeal basis through the subsequent time
21	of your research or study; is that right?	21	period; the next couple of weeks I reviewed a
22	A. That's right.	22	lot of it.
23	Q. It had not been a part of your	23	Q. What did you search for when
24	clinical practice, right?	24	you did this general literature search?
	Page 39		Page 41
1		I	
1	A. That's correct.	1	A. I searched under various search
2	Q. When did you meet with the	2	terms, including "talc," including "ovarian
	Q. When did you meet with the larger group of plaintiffs' counsel?	2 3	terms, including "talc," including "ovarian cancer," the relationship between the two.
2 3 4	<ul><li>Q. When did you meet with the larger group of plaintiffs' counsel?</li><li>A. I believe we had a telephone</li></ul>	2 3 4	terms, including "talc," including "ovarian cancer," the relationship between the two. As I became more familiar with the
2 3 4 5	<ul><li>Q. When did you meet with the larger group of plaintiffs' counsel?</li><li>A. I believe we had a telephone meeting on the 16th of October. I'm not</li></ul>	2 3 4 5	terms, including "talc," including "ovarian cancer," the relationship between the two. As I became more familiar with the literature, I expanded that search into other
2 3 4 5 6	Q. When did you meet with the larger group of plaintiffs' counsel?  A. I believe we had a telephone meeting on the 16th of October. I'm not sure. I have to	2 3 4 5 6	terms, including "talc," including "ovarian cancer," the relationship between the two. As I became more familiar with the literature, I expanded that search into other topics.
2 3 4 5 6 7	Q. When did you meet with the larger group of plaintiffs' counsel?  A. I believe we had a telephone meeting on the 16th of October. I'm not sure. I have to  Q. That's right now I just want	2 3 4 5 6 7	terms, including "talc," including "ovarian cancer," the relationship between the two. As I became more familiar with the literature, I expanded that search into other topics.  As I became I was already
2 3 4 5 6 7 8	Q. When did you meet with the larger group of plaintiffs' counsel?  A. I believe we had a telephone meeting on the 16th of October. I'm not sure. I have to  Q. That's right now I just want estimates.	2 3 4 5 6 7 8	terms, including "talc," including "ovarian cancer," the relationship between the two. As I became more familiar with the literature, I expanded that search into other topics.  As I became I was already aware of issues related to the inclusion of
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2 3 4 5 6 7 8 9	Q. When did you meet with the larger group of plaintiffs' counsel?  A. I believe we had a telephone meeting on the 16th of October. I'm not sure. I have to  Q. That's right now I just want estimates.  A. Okay.  Q. And so I don't as long as	2 3 4 5 6 7 8 9	terms, including "talc," including "ovarian cancer," the relationship between the two. As I became more familiar with the literature, I expanded that search into other topics.  As I became I was already aware of issues related to the inclusion of asbestos in talc deposits, and so I expanded my search into that part of the literature
2 3 4 5 6 7 8 9 10	Q. When did you meet with the larger group of plaintiffs' counsel?  A. I believe we had a telephone meeting on the 16th of October. I'm not sure. I have to  Q. That's right now I just want estimates.  A. Okay.  Q. And so I don't as long as you're reasonably comfortable that it was in	2 3 4 5 6 7 8 9 10	terms, including "talc," including "ovarian cancer," the relationship between the two.  As I became more familiar with the literature, I expanded that search into other topics.  As I became I was already aware of issues related to the inclusion of asbestos in talc deposits, and so I expanded my search into that part of the literature that relates to asbestos in talc or asbestos
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Q. When did you meet with the larger group of plaintiffs' counsel?  A. I believe we had a telephone meeting on the 16th of October. I'm not sure. I have to Q. That's right now I just want estimates.  A. Okay. Q. And so I don't as long as you're reasonably comfortable that it was in that time frame.  A. It was mid October. Q. That's fine. When were you asked the question that the plaintiffs' lawyers wanted you to try to answer in this litigation?  A. Well, after the meeting we parted ways and then made contact again a few days later, and I was told that they were	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	terms, including "talc," including "ovarian cancer," the relationship between the two.  As I became more familiar with the literature, I expanded that search into other topics.  As I became I was already aware of issues related to the inclusion of asbestos in talc deposits, and so I expanded my search into that part of the literature that relates to asbestos in talc or asbestos in ovarian cancer.  As I felt my opinions would need to extend into cancer and carcinogenesis in general, I did some search into ovarian cancer specifically and general carcinogenesis to see what the current state of the art was regarding that in the literature.  I looked at some issues of
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Q. When did you meet with the larger group of plaintiffs' counsel?  A. I believe we had a telephone meeting on the 16th of October. I'm not sure. I have to Q. That's right now I just want estimates.  A. Okay. Q. And so I don't as long as you're reasonably comfortable that it was in that time frame.  A. It was mid October. Q. That's fine. When were you asked the question that the plaintiffs' lawyers wanted you to try to answer in this litigation?  A. Well, after the meeting we parted ways and then made contact again a few days later, and I was told that they were interested in me going ahead and doing a	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	terms, including "talc," including "ovarian cancer," the relationship between the two.  As I became more familiar with the literature, I expanded that search into other topics.  As I became I was already aware of issues related to the inclusion of asbestos in talc deposits, and so I expanded my search into that part of the literature that relates to asbestos in talc or asbestos in ovarian cancer.  As I felt my opinions would need to extend into cancer and carcinogenesis in general, I did some search into ovarian cancer specifically and general carcinogenesis to see what the current state of the art was regarding that in the literature.  I looked at some issues of mining practices.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Q. When did you meet with the larger group of plaintiffs' counsel?  A. I believe we had a telephone meeting on the 16th of October. I'm not sure. I have to Q. That's right now I just want estimates.  A. Okay. Q. And so I don't as long as you're reasonably comfortable that it was in that time frame.  A. It was mid October. Q. That's fine. When were you asked the question that the plaintiffs' lawyers wanted you to try to answer in this litigation?  A. Well, after the meeting we parted ways and then made contact again a few days later, and I was told that they were interested in me going ahead and doing a review and starting to establish opinions.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	terms, including "talc," including "ovarian cancer," the relationship between the two.  As I became more familiar with the literature, I expanded that search into other topics.  As I became I was already aware of issues related to the inclusion of asbestos in talc deposits, and so I expanded my search into that part of the literature that relates to asbestos in talc or asbestos in ovarian cancer.  As I felt my opinions would need to extend into cancer and carcinogenesis in general, I did some search into ovarian cancer specifically and general carcinogenesis to see what the current state of the art was regarding that in the literature.  I looked at some issues of mining practices.  I looked at the Johnson &
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Q. When did you meet with the larger group of plaintiffs' counsel?  A. I believe we had a telephone meeting on the 16th of October. I'm not sure. I have to Q. That's right now I just want estimates.  A. Okay. Q. And so I don't as long as you're reasonably comfortable that it was in that time frame.  A. It was mid October. Q. That's fine. When were you asked the question that the plaintiffs' lawyers wanted you to try to answer in this litigation?  A. Well, after the meeting we parted ways and then made contact again a few days later, and I was told that they were interested in me going ahead and doing a review and starting to establish opinions.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	terms, including "talc," including "ovarian cancer," the relationship between the two.  As I became more familiar with the literature, I expanded that search into other topics.  As I became I was already aware of issues related to the inclusion of asbestos in talc deposits, and so I expanded my search into that part of the literature that relates to asbestos in talc or asbestos in ovarian cancer.  As I felt my opinions would need to extend into cancer and carcinogenesis in general, I did some search into ovarian cancer specifically and general carcinogenesis to see what the current state of the art was regarding that in the literature.  I looked at some issues of mining practices.  I looked at the Johnson &

1 I looked through old notes and 2 lecture files that I had for information that 3 I've used or accessed previously in my 4 professional capacity for information that 5 was pertinent. 6 Just a very dendritic kind of 7 extensive search. 8 Q. You reviewed these materials 9 that you have told us about and then did you 10 prepare your report? 11 A. At that point I well, the 12 literature review took several stages. 13 Typically when you perform a review like 14 this, you end up with a I do a very 15 general sort of approach to a review, so I 16 get much more than will be pertinent to my 18 I find that a valuable approach 19 because it allows me to find things I  1 review of draft versions of my report a review of draft versions of my report and and then did you and point the law of my coll lawyers for plaintiffs or did they come of the people?  10 other people?  11 A. They came from the lawyers and the people report with and the people report with and the people report and the people report with and the people report and the people report with and the people report and the peop	the from
2 lecture files that I had for information that 3 I've used or accessed previously in my 4 professional capacity for information that 5 was pertinent. 6 Just a very dendritic kind of 7 extensive search. 8 Q. You reviewed these materials 9 that you have told us about and then did you 10 prepare your report? 11 A. At that point I well, the 12 literature review took several stages. 13 Typically when you perform a review like 14 this, you end up with a I do a very 15 general sort of approach to a review, so I 16 get much more than will be pertinent to my 18 I find that a valuable approach 18 Comments, in particular 2 comments, in particular 3 Q. Don't tell me about the comments. 5 A. Okay. 6 Q. I don't want to know what the lawyers may have told you. 9 lawyers for plaintiffs or did they come other people? 10 other people? 11 A. They came from the lawyers 12 They also came from a few of my coll 13 Typically when you perform a review like 14 this, you end up with a I do a very 15 general sort of approach to a review, so I 16 J talked to them about it. 17 review eventually. 18 A. Yes, they are.	the from
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4 professional capacity for information that 5 was pertinent. 6 Just a very dendritic kind of 7 extensive search. 8 Q. You reviewed these materials 9 that you have told us about and then did you 10 prepare your report? 11 A. At that point I well, the 12 literature review took several stages. 13 Typically when you perform a review like 14 this, you end up with a I do a very 15 general sort of approach to a review, so I 16 get much more than will be pertinent to my 17 Ifind that a valuable approach 18 Comments.  A. Okay.  A. Did the comments come from lawyers for plaintiffs or did they come other people?  10 other people?  A. They came from the lawyers  They also came from a few of my coll of your share your report with some of your colleagues?  A. I let a few people read it and I talked to them about it.  Q. Are the opinions your opinion A. Yes, they are.	the from
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review eventually.  17 Q. Are the opinions your opinions.  18 I find that a valuable approach.  18 A. Yes, they are.	
I find that a valuable approach 18 A. Yes, they are.	
	ıs?
because it allows me to find things I 19 Q. Have you told me, you know	
	,
wouldn't otherwise find or look for or know 20 generally what you have done to form	ılate
21 to look for. 21 your opinions in this matter?	
And then I'm able to cull 22 A. Yes, I think so.	
23 through that information and discard pieces 23 Q. You did all of this over a	
of the search materials that are not relevant 24 30-day period; is that right?	
Page 43 Pag	e 45
1 or interesting to me and then refine my 1 A. Yes.	
2 search and redo it, extending it into 2 Q. All right. You have no	
3 different areas that have now become 3 invoices, correct?	
4 pertinent in my opinion, until I satisfy 4 A. That's correct.	
5 myself that I have pretty much covered the 5 Q. Is it typical that you'll work	
	and no
6 waterfront so to speak in terms of a 6 on a matter for some number of months	
6 waterfront so to speak in terms of a 6 on a matter for some number of months 7 literature review. 7 generate any invoices?	
7 literature review. 7 generate any invoices?	
7 literature review. 7 generate any invoices? 8 Q. You did your literature review. 8 A. Yes.	
7 literature review. 7 generate any invoices? 8 Q. You did your literature review. 8 A. Yes. 9 You reviewed the Johnson & Johnson website 9 Q. You are billing your time at	
7 literature review. 7 generate any invoices? 8 Q. You did your literature review. 8 A. Yes. 9 You reviewed the Johnson & Johnson website 9 Q. You are billing your time at 10 and the other materials that you have told us 10 what rate?	
7 literature review. 7 generate any invoices? 8 Q. You did your literature review. 8 A. Yes. 9 You reviewed the Johnson & Johnson website 9 Q. You are billing your time at 10 and the other materials that you have told us 10 what rate? 11 about. 11 A. \$450 per hour.	
7 literature review. 7 generate any invoices? 8 Q. You did your literature review. 8 A. Yes. 9 You reviewed the Johnson & Johnson website 9 Q. You are billing your time at 10 and the other materials that you have told us 10 what rate? 11 about. 11 A. \$450 per hour. 12 Did you then formulate your 12 Q. Can you estimate for us the	ng
7 literature review. 8 Q. You did your literature review. 9 You reviewed the Johnson & Johnson website 10 and the other materials that you have told us 11 about. 12 Did you then formulate your 13 opinions and set them down in your report 17 generate any invoices? A. Yes. 9 Q. You are billing your time at what rate? 11 A. \$450 per hour. 12 Q. Can you estimate for us the number of hours that you have spent do	ng
7 literature review. 8 Q. You did your literature review. 9 You reviewed the Johnson & Johnson website 10 and the other materials that you have told us 11 about. 12 Did you then formulate your 13 opinions and set them down in your report 14 which we marked as Exhibit 2? 7 generate any invoices? A. Yes. 9 Q. You are billing your time at what rate? 10 A. \$450 per hour. 11 Q. Can you estimate for us the number of hours that you have spent do your literature review, formulating your	ng
7 literature review. 8 Q. You did your literature review. 9 You reviewed the Johnson & Johnson website 10 and the other materials that you have told us 11 about. 12 Did you then formulate your 13 opinions and set them down in your report 14 which we marked as Exhibit 2? 15 A. I did. I began writing as I  7 generate any invoices? A. Yes. Q. You are billing your time at what rate? 10 what rate? 11 A. \$450 per hour. 12 Q. Can you estimate for us the number of hours that you have spent do your literature review, formulating your opinions, and writing your report?	ng
7 generate any invoices?  8 Q. You did your literature review. 9 You reviewed the Johnson & Johnson website 10 and the other materials that you have told us 11 about. 12 Did you then formulate your 13 opinions and set them down in your report 14 which we marked as Exhibit 2? 15 A. I did. I began writing as I 16 reviewed the Johnson & Johnson website 19 Q. You are billing your time at what rate? 10 what rate? 11 A. \$450 per hour. 12 Q. Can you estimate for us the number of hours that you have spent do your literature review, formulating your opinions, and writing your report? 16 A. There's still some tallying I	
7 generate any invoices?  8 Q. You did your literature review. 9 You reviewed the Johnson & Johnson website 10 and the other materials that you have told us 11 about. 12 Did you then formulate your 13 opinions and set them down in your report 14 which we marked as Exhibit 2? 15 A. I did. I began writing as I 16 reviewed the literature and continued to take 17 notes which, through a continuous editing 18 A. Yes.  9 Q. You are billing your time at what rate?  10 A. \$450 per hour.  11 Q. Can you estimate for us the number of hours that you have spent do your literature review, formulating your opinions, and writing your report?  18 A. Yes.  9 Q. You are billing your time at what rate?  11 A. \$450 per hour.  12 Q. Can you estimate for us the number of hours that you have spent do your literature review, formulating your opinions, and writing your report?  16 reviewed the literature and continued to take notes which, through a continuous editing 17 need to do from my calendar, but it's be	
7 generate any invoices? 8 Q. You did your literature review. 9 You reviewed the Johnson & Johnson website 10 and the other materials that you have told us 11 about. 12 Did you then formulate your 13 opinions and set them down in your report 14 which we marked as Exhibit 2? 15 A. I did. I began writing as I 16 reviewed the literature and continued to take 17 notes which, through a continuous editing 18 process, eventually became my report. 19 Q. Can you estimate for us the 10 number of hours that you have spent do 11 your literature review, formulating your 12 poinions, and writing your report? 13 need to do from my calendar, but it's be 15 and 180 hours.	ween
7 literature review. 8 Q. You did your literature review. 9 You reviewed the Johnson & Johnson website 10 and the other materials that you have told us 11 about. 12 Did you then formulate your 13 opinions and set them down in your report 14 which we marked as Exhibit 2? 15 A. I did. I began writing as I 16 reviewed the literature and continued to take 17 notes which, through a continuous editing 18 process, eventually became my report? 19 Q. Did you prepare your report? 19 Q. Does that include your meeting	ween
Iliterature review.  Q. You did your literature review.  You reviewed the Johnson & Johnson website and the other materials that you have told us about.  Did you then formulate your  Did you then formulate your  A. \$450 per hour.  Q. Can you estimate for us the number of hours that you have spent do which we marked as Exhibit 2?  A. I did. I began writing as I  reviewed the literature and continued to take notes which, through a continuous editing notes which, through a continuous editing Process, eventually became my report.  Q. Did you prepare your report?  Q. Does that include your meeting and communications with plaintiffs' cou	ween
literature review.  Q. You did your literature review.  You reviewed the Johnson & Johnson website and the other materials that you have told us about.  Did you then formulate your opinions and set them down in your report  A. I did. I began writing as I reviewed the literature and continuous editing notes which, through a continuous editing process, eventually became my report.  Q. Did you prepare your report?  A. I did.  Q. Did anyone assist you in the  generate any invoices?  A. Yes.  Q. You are billing your time at what rate?  Q. Can you estimate for us the number of hours that you have spent do your literature review, formulating your opinions, and writing your report?  A. There's still some tallying I need to do from my calendar, but it's be 150 and 180 hours.  Q. Does that include your meeting and communications with plaintiffs' cou 21  A. Yes, that's up until today.	ween
literature review.  Q. You did your literature review.  You reviewed the Johnson & Johnson website and the other materials that you have told us billing your time at about.  Did you then formulate your opinions and set them down in your report which we marked as Exhibit 2?  A. I did. I began writing as I reviewed the literature and continued to take process, eventually became my report.  Did you prepare your report?  A. I did.  Did anyone assist you in the preparation of your report?  Did your literature any invoices?  A. Yes.  A. Yes, that's up until today.  Q. Other than meeting with	ween gs nsel?
Ilterature review.  Q. You did your literature review.  You reviewed the Johnson & Johnson website and the other materials that you have told us about.  Did you then formulate your opinions and set them down in your report which we marked as Exhibit 2?  A. I did. I began writing as I reviewed the literature and continued to take notes which, through a continuous editing process, eventually became my report.  Q. Did you prepare your report?  A. I did.  Did you prepare your report?  A. There's still some tallying I need to do from my calendar, but it's be 150 and 180 hours.  Q. Does that include your meeting and communications with plaintiffs' cou and communications with plaintiffs' cou 21  Q. Did anyone assist you in the	ween gs nsel?

	Page 46		Page 48
1	A. No.	1	A. I have not had any discussions
2	Q. What other plaintiff lawyers	2	with Dr. Dydek. We may have met previously,
3	have you met with or talked with as part of	3	but I don't recall.
4	your formulating your opinions and doing your	4	Q. Any previous meeting with
5	literature review?	5	Dr. Dydek, did it relate to this litigation?
6	A. We've had a number of	6	A. No.
7	conference calls where there were several of	7	Q. Did it relate to expert witness
8	these attorneys' colleagues on the line, but	8	work that you were doing?
9	in terms of in-person meetings, those have	9	A. No.
10	been with Ms. O'Dell and Ms. Thompson,	10	Q. Do you know what the
11	Dr. Thompson.	11	relationship is, if any, between Dr. Thompson
12	Q. How many meetings have you had	12	and Dr. Dydek?
13	with Ms. O'Dell?	13	A. I don't know of any
14	A. Three.	14	relationship outside of his work as an expert
15	Q. How many meetings have you had	15	witness in related litigation.
16	with Dr. Thompson?	16	Q. Dr. Crowley, do you know
17	A. Three.	17	Michael Crowley?
18	Q. Did you know Dr. Thompson	18	A. I know of Dr. Crowley.
19	before you were retained in this matter?	19	Q. Did you know of Dr. Crowley
20	A. I did not.	20	before you were retained in the talcum powder
21	Q. Any other plaintiff lawyers in	21	litigation?
22	this litigation that you are aware of	22	A. No.
23	strike that.	23	Q. Have you ever met with
24	Any other plaintiff lawyers in	24	Dr. Crowley?
	This offer plantage in the second		211 616 11129 1
	Page 47		Page 49
1	this matter that you've had communications	1	A. I have not.
1 2	this matter that you've had communications with other than what you have told us?	1 2	<ul><li>A. I have not.</li><li>Q. Ever talked with Dr. Crowley?</li></ul>
	this matter that you've had communications with other than what you have told us?  A. No.		<ul><li>A. I have not.</li><li>Q. Ever talked with Dr. Crowley?</li><li>A. I have not.</li></ul>
2	this matter that you've had communications with other than what you have told us?  A. No. Q. Do you have any social	2 3 4	<ul><li>A. I have not.</li><li>Q. Ever talked with Dr. Crowley?</li><li>A. I have not.</li><li>Q. You reviewed his report as part</li></ul>
2	this matter that you've had communications with other than what you have told us?  A. No.	2 3	<ul> <li>A. I have not.</li> <li>Q. Ever talked with Dr. Crowley?</li> <li>A. I have not.</li> <li>Q. You reviewed his report as part of your review in this matter; is that right?</li> </ul>
2 3 4	this matter that you've had communications with other than what you have told us?  A. No. Q. Do you have any social	2 3 4	<ul> <li>A. I have not.</li> <li>Q. Ever talked with Dr. Crowley?</li> <li>A. I have not.</li> <li>Q. You reviewed his report as part of your review in this matter; is that right?</li> <li>A. That's correct.</li> </ul>
2 3 4 5	this matter that you've had communications with other than what you have told us?  A. No. Q. Do you have any social relationship with any of the plaintiffs' counsel?  A. No.	2 3 4 5 6 7	<ul> <li>A. I have not.</li> <li>Q. Ever talked with Dr. Crowley?</li> <li>A. I have not.</li> <li>Q. You reviewed his report as part of your review in this matter; is that right?</li> <li>A. That's correct.</li> <li>Q. Do you know who any of the</li> </ul>
2 3 4 5 6 7 8	this matter that you've had communications with other than what you have told us?  A. No. Q. Do you have any social relationship with any of the plaintiffs' counsel?  A. No. Q. Your relationship with	2 3 4 5 6	<ul> <li>A. I have not.</li> <li>Q. Ever talked with Dr. Crowley?</li> <li>A. I have not.</li> <li>Q. You reviewed his report as part of your review in this matter; is that right?</li> <li>A. That's correct.</li> <li>Q. Do you know who any of the other experts are in this litigation for</li> </ul>
2 3 4 5 6 7 8 9	this matter that you've had communications with other than what you have told us?  A. No. Q. Do you have any social relationship with any of the plaintiffs' counsel?  A. No. Q. Your relationship with Dr. Thompson is just the three meetings that	2 3 4 5 6 7	<ul> <li>A. I have not.</li> <li>Q. Ever talked with Dr. Crowley?</li> <li>A. I have not.</li> <li>Q. You reviewed his report as part of your review in this matter; is that right?</li> <li>A. That's correct.</li> <li>Q. Do you know who any of the other experts are in this litigation for plaintiffs?</li> </ul>
2 3 4 5 6 7 8	this matter that you've had communications with other than what you have told us?  A. No. Q. Do you have any social relationship with any of the plaintiffs' counsel?  A. No. Q. Your relationship with	2 3 4 5 6 7 8	<ul> <li>A. I have not.</li> <li>Q. Ever talked with Dr. Crowley?</li> <li>A. I have not.</li> <li>Q. You reviewed his report as part of your review in this matter; is that right?</li> <li>A. That's correct.</li> <li>Q. Do you know who any of the other experts are in this litigation for</li> </ul>
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	this matter that you've had communications with other than what you have told us?  A. No. Q. Do you have any social relationship with any of the plaintiffs' counsel?  A. No. Q. Your relationship with Dr. Thompson is just the three meetings that you have been involved in with her?  A. Well, we've exchanged e-mail communications, but other than that, no. Q. Have you met with or talked with any other expert witness for plaintiffs?  A. No, I have not. Q. Do you know who Thomas Dydek is?  A. Yes. Q. Who is Thomas Dydek? A. He is a toxicologist.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. I have not. Q. Ever talked with Dr. Crowley? A. I have not. Q. You reviewed his report as part of your review in this matter; is that right? A. That's correct. Q. Do you know who any of the other experts are in this litigation for plaintiffs? A. Well, I know there are a number of people who have generated reports that I have also reviewed. Q. What reports have you reviewed from plaintiffs' other experts? A. Well, I've reviewed several reports from Dr. Longo, who's done work on the presence of asbestos in talc products and related things. I think he's the only other expert that I'm aware of at this point. Q. Well, you're aware of
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2 3 re	transcripts from Dr. Dydek? A. Yes, I reviewed an expert	1 2	that you're aware of?
2 3 re 4 in	A. Yes, I reviewed an expert	1	•
4 in		. 4	A. No.
4 in	port that he provided before I got involved	3	Q. Are you aware of any of the
	this case.	4	experts for defendants in the talcum powder
	Q. Did you review that report	5	litigation?
	efore you prepared your report?	6	A. No.
7	A. Yes.	7	Q. Have you reviewed any reports
8	Q. Did you review Dr. Crowley's	8	from any of the experts in the talcum powder
	port before you prepared your report?	9	litigation?
10	A. Yes.	10	A. I have not.
11	Q. And you reviewed Dr. Longo's	11	Q. Have you reviewed any of the
	port before you prepared your report; is	12	transcripts of defense experts in the talcum
	at right?	13	powder litigation?
14	A. I've reviewed one report.	14	A. I've reviewed some deposition
	here was another one that became available	15	transcripts of various witnesses.
	ter.	16	Q. Those witnesses are all listed
16 ai	Q. The second report is what you	17	in either your references or your literature;
		18	
	ought here with you today and we marked as whibit 5; is that right?	1	is that right?
		19	A. Yes.
20	A. Yes.	20	Q. Did you review the entire
21	Q. Any other plaintiff experts	21	transcripts of the witnesses that you've
	at you're aware of?	22	identified?
23	A. Not that I can think of, no.	23	A. I think for the most part I
24	Q. Any other reports from	24	would say yes.
	Page 51		Page 53
1 pl	laintiffs' experts that you have reviewed?	1	Q. Did you review the exhibits to
2	A. Well, there's a there is an	2	those depositions?
3 ar	ticle that's been submitted for publication	3	A. Yes. If they were provided to
4 w	hich I consider a piece of the scientific	4	me, I did, yes.
5 li	terature. You mentioned Dr. Saed earlier,	5	Q. Did you believe that it was
6 ar	nd I know that he has a relationship with	6	your job to do an independent assessment as
	is case as well.	7	to whether or not the habitual use of talcum
8	Q. What is his relationship with	8	powder causes or can cause ovarian cancer?
9 th	is case, Dr. Saed?	9	MS. O'DELL: Object to the
10	A. He's provided some work at the	10	form.
11 re	equest of the attorneys here.	11	A. Could you repeat the question,
12	Q. Have you reviewed that work?	12	please.
13	A. That's the subject of several	13	BY MR. ZELLERS:
	ticles he's published previously, he and	14	Q. Sure.
	is colleagues, as well as the additional one	15	Plaintiffs asked you to
	at I brought today.	16	strike that.
17	Q. Other than the articles that	17	Plaintiffs' counsel asked you
	ou have listed on your reference and	18	to answer that question; is that right?
-	terature list and the Saed article that you	19	A. Yes.
	rought with you today, are you aware of any	20	Q. You understood that they were
20 hi	ther work that Dr. Saed has done in this	21	looking to develop an association or a causal
21 of		22	
21 of 22 m	natter?	22 23	relationship between the habitual use of
21 of		22 23 24	

	Page 54		Page 56
1	MS. O'DELL: Object to the	1	A. Probably 5%.
2	form.	2	Q. What percent of your income
3	Excuse me, I'm sorry,	3	comes from the work that you do as a
4	gentlemen. Give me just one second to	4	consultant?
5	object if I need to.	5	A. Of course it varies quite a bit
6	THE WITNESS: Sure.	6	from moment to moment, but it would be less
7	MS. O'DELL: Thank you.	7	than 10%.
8	BY MR. ZELLERS:	8	Q. Have you ever testified at
9	Q. Did you consider the literature	9	trial?
10	and the sources that refuted that association	10	A. Yes.
11	or causal relationship?	11	Q. On how many occasions?
12	A. I tried to consider all the	12	A. Probably ten.
13	available literature.	13	Q. The 30 to 35 depositions that
14	Q. When you wrote your report	14	you've given previously, those have been in
15	setting forth your opinions, did you set	15	the context of you providing litigation
16	forth the sources that refuted the	16	consulting services; is that right?
17	propositions you were making?	17	A. In terms of expert testimony,
18	A. I cited several sources that on	18	yes.
19	the surface might seem to refute my opinions.	19	Q. The trial appearances that
20	Q. And you believe that is	20	you've made, are those also in your capacity
21	contained in your report which we marked as	21	as an expert witness?
22	Exhibit 2; is that right?	22	A. Yes.
23	A. Yes.	23	Q. Have you been involved in other
24	Q. Have you been involved in any	24	litigations?
	Page 55		Page 57
1		1	Page 57 A. Yes.
1 2	Page 55 other talcum powder litigation other than this talc MDL matter that Mr. Abney talked to	1 2	
	other talcum powder litigation other than		A. Yes.
2	other talcum powder litigation other than this talc MDL matter that Mr. Abney talked to	2	<ul><li>A. Yes.</li><li>Q. What other litigations have you</li></ul>
2	other talcum powder litigation other than this talc MDL matter that Mr. Abney talked to you about?	2 3	<ul><li>A. Yes.</li><li>Q. What other litigations have you been involved in as an expert?</li></ul>
2 3 4	other talcum powder litigation other than this talc MDL matter that Mr. Abney talked to you about?  A. No, I haven't.	2 3 4	<ul><li>A. Yes.</li><li>Q. What other litigations have you been involved in as an expert?</li><li>A. Well, I've been asked to</li></ul>
2 3 4 5	other talcum powder litigation other than this talc MDL matter that Mr. Abney talked to you about?  A. No, I haven't. Q. In the 30 to 35 occasions that	2 3 4 5	<ul> <li>A. Yes.</li> <li>Q. What other litigations have you been involved in as an expert?</li> <li>A. Well, I've been asked to provide opinions and testify in a number of</li> </ul>
2 3 4 5 6	other talcum powder litigation other than this talc MDL matter that Mr. Abney talked to you about?  A. No, I haven't. Q. In the 30 to 35 occasions that you've testified in the past, have any of those been on issues relating to talcum powder and any association between talcum	2 3 4 5 6	A. Yes. Q. What other litigations have you been involved in as an expert? A. Well, I've been asked to provide opinions and testify in a number of cases, most of which involved personal injury
2 3 4 5 6 7	other talcum powder litigation other than this talc MDL matter that Mr. Abney talked to you about?  A. No, I haven't. Q. In the 30 to 35 occasions that you've testified in the past, have any of those been on issues relating to talcum	2 3 4 5 6 7 8	A. Yes. Q. What other litigations have you been involved in as an expert? A. Well, I've been asked to provide opinions and testify in a number of cases, most of which involved personal injury in the occupational setting or environmental exposures. Q. Has the majority of your expert
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2 3 4 5 6 7 8 9 10 11 12 13 14 15	other talcum powder litigation other than this talc MDL matter that Mr. Abney talked to you about?  A. No, I haven't. Q. In the 30 to 35 occasions that you've testified in the past, have any of those been on issues relating to talcum powder and any association between talcum powder and ovarian cancer?  A. No. Q. You are not an expert in asbestos, correct?  MS. O'DELL: Object to the form. A. I'm an occupational medicine	2 3 4 5 6 7 8 9 10 11 12 13 14 15	A. Yes. Q. What other litigations have you been involved in as an expert? A. Well, I've been asked to provide opinions and testify in a number of cases, most of which involved personal injury in the occupational setting or environmental exposures. Q. Has the majority of your expert work in the occupational setting and for environmental exposures been on behalf of plaintiffs? A. No, it's been split about 50/50, plaintiff and defense. Q. Have you ever been retained in
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	other talcum powder litigation other than this talc MDL matter that Mr. Abney talked to you about?  A. No, I haven't.  Q. In the 30 to 35 occasions that you've testified in the past, have any of those been on issues relating to talcum powder and any association between talcum powder and ovarian cancer?  A. No.  Q. You are not an expert in asbestos, correct?  MS. O'DELL: Object to the form.  A. I'm an occupational medicine physician, and I have a significant amount of awareness and training regarding asbestos as it relates to occupational exposures and	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	A. Yes. Q. What other litigations have you been involved in as an expert? A. Well, I've been asked to provide opinions and testify in a number of cases, most of which involved personal injury in the occupational setting or environmental exposures. Q. Has the majority of your expert work in the occupational setting and for environmental exposures been on behalf of plaintiffs? A. No, it's been split about 50/50, plaintiff and defense. Q. Have you ever been retained in a case involving cosmetic products?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	other talcum powder litigation other than this talc MDL matter that Mr. Abney talked to you about?  A. No, I haven't. Q. In the 30 to 35 occasions that you've testified in the past, have any of those been on issues relating to talcum powder and any association between talcum powder and ovarian cancer?  A. No. Q. You are not an expert in asbestos, correct?  MS. O'DELL: Object to the form.  A. I'm an occupational medicine physician, and I have a significant amount of awareness and training regarding asbestos as it relates to occupational exposures, but I don't	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	A. Yes. Q. What other litigations have you been involved in as an expert? A. Well, I've been asked to provide opinions and testify in a number of cases, most of which involved personal injury in the occupational setting or environmental exposures. Q. Has the majority of your expert work in the occupational setting and for environmental exposures been on behalf of plaintiffs? A. No, it's been split about 50/50, plaintiff and defense. Q. Have you ever been retained in a case involving cosmetic products? A. No.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	other talcum powder litigation other than this talc MDL matter that Mr. Abney talked to you about?  A. No, I haven't. Q. In the 30 to 35 occasions that you've testified in the past, have any of those been on issues relating to talcum powder and any association between talcum powder and ovarian cancer?  A. No. Q. You are not an expert in asbestos, correct?  MS. O'DELL: Object to the form.  A. I'm an occupational medicine physician, and I have a significant amount of awareness and training regarding asbestos as it relates to occupational exposures, but I don't consider myself an asbestos expert.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. Yes. Q. What other litigations have you been involved in as an expert? A. Well, I've been asked to provide opinions and testify in a number of cases, most of which involved personal injury in the occupational setting or environmental exposures. Q. Has the majority of your expert work in the occupational setting and for environmental exposures been on behalf of plaintiffs? A. No, it's been split about 50/50, plaintiff and defense. Q. Have you ever been retained in a case involving cosmetic products? A. No. Q. Your curriculum vitae that we
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	other talcum powder litigation other than this talc MDL matter that Mr. Abney talked to you about?  A. No, I haven't. Q. In the 30 to 35 occasions that you've testified in the past, have any of those been on issues relating to talcum powder and any association between talcum powder and ovarian cancer?  A. No. Q. You are not an expert in asbestos, correct?  MS. O'DELL: Object to the form.  A. I'm an occupational medicine physician, and I have a significant amount of awareness and training regarding asbestos as it relates to occupational exposures, but I don't	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. Yes. Q. What other litigations have you been involved in as an expert? A. Well, I've been asked to provide opinions and testify in a number of cases, most of which involved personal injury in the occupational setting or environmental exposures. Q. Has the majority of your expert work in the occupational setting and for environmental exposures been on behalf of plaintiffs? A. No, it's been split about 50/50, plaintiff and defense. Q. Have you ever been retained in a case involving cosmetic products? A. No. Q. Your curriculum vitae that we marked as Exhibit 3, is it correct and up to
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	other talcum powder litigation other than this talc MDL matter that Mr. Abney talked to you about?  A. No, I haven't. Q. In the 30 to 35 occasions that you've testified in the past, have any of those been on issues relating to talcum powder and any association between talcum powder and ovarian cancer?  A. No. Q. You are not an expert in asbestos, correct?  MS. O'DELL: Object to the form.  A. I'm an occupational medicine physician, and I have a significant amount of awareness and training regarding asbestos as it relates to occupational exposures and general environmental exposures, but I don't consider myself an asbestos expert.  BY MR. ZELLERS: Q. What percentage of your time do	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	A. Yes. Q. What other litigations have you been involved in as an expert? A. Well, I've been asked to provide opinions and testify in a number of cases, most of which involved personal injury in the occupational setting or environmental exposures. Q. Has the majority of your expert work in the occupational setting and for environmental exposures been on behalf of plaintiffs? A. No, it's been split about 50/50, plaintiff and defense. Q. Have you ever been retained in a case involving cosmetic products? A. No. Q. Your curriculum vitae that we marked as Exhibit 3, is it correct and up to date? A. It was up to date at the time of submission of my report in the end of
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	other talcum powder litigation other than this talc MDL matter that Mr. Abney talked to you about?  A. No, I haven't. Q. In the 30 to 35 occasions that you've testified in the past, have any of those been on issues relating to talcum powder and any association between talcum powder and ovarian cancer?  A. No. Q. You are not an expert in asbestos, correct?  MS. O'DELL: Object to the form.  A. I'm an occupational medicine physician, and I have a significant amount of awareness and training regarding asbestos as it relates to occupational exposures and general environmental exposures, but I don't consider myself an asbestos expert. BY MR. ZELLERS:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. Yes. Q. What other litigations have you been involved in as an expert? A. Well, I've been asked to provide opinions and testify in a number of cases, most of which involved personal injury in the occupational setting or environmental exposures. Q. Has the majority of your expert work in the occupational setting and for environmental exposures been on behalf of plaintiffs? A. No, it's been split about 50/50, plaintiff and defense. Q. Have you ever been retained in a case involving cosmetic products? A. No. Q. Your curriculum vitae that we marked as Exhibit 3, is it correct and up to date? A. It was up to date at the time

	Page 58		Page 60
1	or corrections need to be made to your CV,	1	is that right?
2	Exhibit 3, to bring it up to date?	2	A. Yes.
3	A. Well, I've terminated a	3	Q. What percentage of your time is
4	relationship with the University of Texas	4	spent in the clinical practice of medicine?
5	Medical Branch in Galveston where I was	5	A. Currently I see patients
6	their the medical director of their	6	one-half day a week and work as a supervisor
7	Employee Health Services Clinic. I continue	7	of the occupational medicine residents for
8	to be serve as an assistant clinical	8	additional time during the week, so clinical
9	professor of preventive medicine and family	9	activities would be about probably 12 hours a
10	medicine at that institution.	10	week.
11	I have terminated my	11	Q. Do you see or treat women for
12	relationship with the Enbridge Corporation as	12	gynecologic cancer?
13	their medical director.	13	A. I do not.
14		14	O. You have never worked for a
15	The Spectra Energy entry, which is about the seventh on the list of		•
16		15 16	company that manufactures cosmetic products, correct?
16 17	professional activities, is also terminated	17	
	as that was a company that was merged and		
18	became Enbridge.	18	Q. You're not a gynecologist or an
19	Q. Any other corrections or	19	oncologist, correct?
20	updates to your curriculum vitae that we've	20	A. That's correct.
21	marked as Exhibit 3?	21	Q. You're not a cancer biologist?
22	A. No.	22	MS. O'DELL: Object to the
23	Q. Why are you no longer serving	23	form.
24	as medical director, Employee Health Services	24	A. That's correct.
	Page 59		Page 61
1	with the University of Texas?	1	BY MR. ZELLERS:
2	MS. O'DELL: Objection to form.	2	Q. You are not a geologist,
3	A. That was a contract that I had	3	mineralogist or microscopist?
4	through the University of Texas Houston	4	A. That's correct.
5	College of Nursing that provided those	5	Q. You're not an epidemiologist?
6	services to UTMB, and UTMB decided to make a	6	A. Well, I may be considered an
7	change and go with another contractor.	7	epidemiologist simply by my appointment as an
8	BY MR. ZELLERS:	8	associate professor in the Department of
9	Q. Why are you no longer serving	9	Epidemiology at the School of Public Health
10	as medical director for Spectra Energy	10	here in Houston.
11	Corporation and Enbridge Corporation?	11	Q. Do you have any professional
12	A. Well, Spectra Energy no longer	12	education in the field well, strike that.
13	exists; it became Enbridge Corporation. And	13	Have you ever published or
14	in October of 2018, I determined that I did	14	conducted a meta-analysis?
15	not I no longer had sufficient time to	15	A. I have conducted meta-analyses.
	provide that service.	16	I've not published them.
			Q. You did not do any type of
16	•	1 17	Q. 100 010 110 00 011 1 1 1 1 0 01
16 17	Q. Your undergraduate degree was	17 18	
16 17 18	Q. Your undergraduate degree was in biologic sciences with a concentration in	18	fellowship in epidemiology, correct?
16 17 18 19	Q. Your undergraduate degree was in biologic sciences with a concentration in engineering; is that right?	18 19	fellowship in epidemiology, correct?  A. That's correct.
16 17 18 19 20	Q. Your undergraduate degree was in biologic sciences with a concentration in engineering; is that right?  A. Yes.	18 19 20	fellowship in epidemiology, correct?  A. That's correct.  Q. You're not board certified in
16 17 18 19 20 21	Q. Your undergraduate degree was in biologic sciences with a concentration in engineering; is that right?  A. Yes.  Q. You received a Ph.D. in	18 19 20 21	fellowship in epidemiology, correct?  A. That's correct.  Q. You're not board certified in epidemiology; is that right?
16 17 18 19 20 21	Q. Your undergraduate degree was in biologic sciences with a concentration in engineering; is that right?  A. Yes.  Q. You received a Ph.D. in toxicology; is that right?	18 19 20 21 22	fellowship in epidemiology, correct?  A. That's correct.  Q. You're not board certified in epidemiology; is that right?  A. I don't believe there is a
16 17 18 19 20 21	Q. Your undergraduate degree was in biologic sciences with a concentration in engineering; is that right?  A. Yes.  Q. You received a Ph.D. in	18 19 20 21	fellowship in epidemiology, correct?  A. That's correct.  Q. You're not board certified in epidemiology; is that right?

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	Page 62		Page 64
1	a pulmonologist?	1	A. I think I had opinions about
2	A. That's correct.	2	talcum powder and its constituents, but if
3	Q. You're not a material	3	you could be more specific, I might be able
4	scientist?	4	to give you a more specific answer.
5	A. That's correct.	5	BY MR. ZELLERS:
6	Q. Nor are you a pathologist?	6	Q. Did you ever, before getting
7	A. Correct.	7	involved in this litigation in October of
8	Q. You've never been involved in	8	2018, do research strike that.
9	any pathological exam or research relating to	9	You've never published on
10	ovarian cancer; is that right?	10	talcum powder, correct?
11	MS. O'DELL: Object to the	11	A. That's correct.
12	form.	12	Q. You have never published on the
13	A. I'm not sure exactly what you	13	constituent components of talcum powder,
14	mean by your question.	14	correct?
15	BY MR. ZELLERS:	15	A. That may not be the case. I've
16	Q. Sure. Let me withdraw that.	16	done work in some other minerals which have
17	You've never been involved in	17	resulted in publications, for example,
18	terms of the research relating to ovarian	18	vermiculite, which have touched on the issues
19	cancer, correct?	19	of asbestos, association with tale,
20	A. Not specifically, no.	20	association with other minerals, but never
21	Q. You've never authored any	21	specifically regarding talc.
22	literature or publications relating to talcum	22	Q. Are those publications on your
23	powder?	23	CV?
24	A. No.	24	A. They are.
	Page 63		Page 65
1	Q. Or relating to ovarian cancer,	1	Q. That we marked as Exhibit 3?
2	correct?	2	A. Yes.
3	A. No.	3	Q. Okay. Have you ever
4	Q. Okay. What journals well,	4	communicated with the FDA regarding talcum
5	strike that.	5	powder?
6	You have never published on	6	A. I've not.
7	fragrance chemicals; is that right?	7	Q. Have you ever communicated with
8	MS. O'DELL: Object to the	8	Health Canada regarding talcum powder?
9	form.	9	A. No.
10	A. That's correct.	10	Q. When did you first start
11	BY MR. ZELLERS:	11	preparing your report which we've marked as
12	Q. Never done any research on	12	Exhibit 2?
13	fragrance chemicals, correct?	13	A. Well, I began a literature
14	A. I've done some work with	14	review immediately after talking to
15	fragrance chemicals and health effects that	15	Mr. Abney.
16	are associated with them, but I have not I	16	Q. My question, I guess, is: When
17	would not classify that as research or	17	did you start writing your report?
18	publication.	18	A. Well, technically I started
19	Q. You had no opinions regarding	19	writing my report after I was retained by
20	talcum powder or any of its constituent	20	plaintiffs' counsel.
21	components before getting involved in this	21	Q. Late October, early
22	litigation; is that right?	22	November 2018?
23	MS. O'DELL: Object to the	23	MS. O'DELL: Object to the
24	form.	24	form, misstates his prior testimony.

		Ι	
	Page 66		Page 68
1	A. In October of 2018.	1	and bolts of what goes on legally in this
2	BY MR. ZELLERS:	2	case. I know there are multiple lawsuits,
3	Q. Have you reviewed any of the	3	and I'm not sure which ones those these
4	deposition transcripts of any of the experts	4	are pertinent to.
5	that have been deposed in this litigation?	5	BY MR. ZELLERS:
6	A. Yes.	6	Q. My question is a little
7	Q. What deposition transcripts of	7	different and I hope pretty simple: In
8	experts have you reviewed?	8	addition to the depositions, transcripts and
9	A. Oh, of experts? No, I have not	9	reports that you have listed on pages 27 and
10	reviewed well, I've reviewed I've	10	28 of Exhibit 4, your literature list, are
11	reviewed expert depositions, but I don't know	11	there any additional depositions or
12	what case they were deposed in, but it	12	transcripts that you've reviewed?
13	relates to talcum powder and ovarian cancer	13	A. Pardon me for a moment while I
14	issue.	14	review this.
15	Q. What expert depositions have	15	(Document review.)
16	you reviewed?	16	A. No, I'm not aware that there
17	A. They're all cited in the	17	are.
18	literature exhibit.	18	BY MR. ZELLERS:
19	Q. All of the deposition	19	Q. Your testimony earlier was that
20	transcripts that you've reviewed are cited in	20	you have reviewed each of those depositions
21	Exhibit 4?	21	in their entirety; is that right?
22	A. I think any of the transcripts	22	A. Yes.
23	that I review are reviewed are probably	23	Q. You have also reviewed the
24	included in here.	24	exhibits to those depositions; is that right?
			,,
	Page 67		Page 69
1	Q. Are you aware of reviewing any	1	A. If they were made available to
2	transcripts that you did not include in your	2	me, I've looked at all those exhibits as
3	literature statement?	3	well.
4	A. I'm not aware, but I can't tell	4	Q. On page 27 of Exhibit 4, who is
5	you as I'm sitting here right now whether all	5	Annie Yessaian?
6	of those are included in this literature	6	A. On page 24?
7	statement or not.	7	Q. Strike that. I'm sorry. On
8	Q. You looking at page	8	page 27 of Exhibit 4
9	MS. O'DELL: I'm sorry. Go	9	A. I see.
10	ahead.	10	Q at the bottom, who is Annie
11	BY MR. ZELLERS:	11	Yessaian?
12	Q. Are there any that you believe	12	A. I don't recall.
13	you have reviewed that are not included in	13	Q. You reviewed her entire
14	the literature statement?	14	transcript and you don't recall who she is?
15	A. Well, let me just see here.	15	A. I don't.
16	There are	16	Q. Well, go to the next page. Who
17	MS. O'DELL: I think they're at	17	is Pat Downey?
18	the end, Dr. Carson.	18	A. I believe Pat Downey is an
19	THE WITNESS: At the very end.	19	operative of the Imerys company.
20	A. Beginning on page 27 is a list	20	Q. Do you know what Mr. Downey's
0.1	of the depositions, transcripts and reports	21	position is?
21		22	
21	that I've reviewed, which include some of the	44	A. It's a supervisory position
	that I've reviewed, which include some of the expert witnesses, but again, I would have to	23	1 1
22	expert witnesses, but again, I would have to say I'm I'm sort of unaware of the nuts		regarding regarding quality of the talc product.

	Page 70		Page 72
1	Q. Who is John Hopkins?	1	BY MR. ZELLERS:
2	A. John Hopkins is an official, I	2	Q. Once you looked at these
3	believe, of I'm not sure of Johnson &	3	documents, the Imerys documents and the
4	Johnson, I believe, who has some oversight of	4	documents produced by the Johnson & Johnson
5	talc quality as well.	5	companies, did you ask plaintiffs' counsel
6	Q. Susan Nicholson, who is she?	6	for any additional documents?
7	A. I don't recall.	7	A. I did not. My understanding is
8	Q. Who is Julie Pier?	8	that most of these are reports, testing
9	A. Julie Pier is another scientist	9	reports, and most of them are positive
10	who works for Imerys, who is responsible for	10	results regarding the presence of asbestos or
11	testing and quality.	11	fibers in the product. And I know that there
12	Q. In your clinical and academic	12	were many others that may not have shown
13	practice, do you typically rely upon	13	positive results that I did not look at.
14	depositions of company witnesses or experts?	14	Q. Did you ask the plaintiff
15	MS. O'DELL: Object to the	15	attorneys to show you or provide you with the
16	form.	16	testing documentation that showed an absence
16 17	A. If there's pertinent	17	of asbestos or asbestos fibers in the talcum
18	information in there that leads me to other	18	powder?
19		19	
20	areas or helps me formulate my opinions, then	20	
21	yes.	21	are equivalent to these that were negative, no, I did not request those.
	BY MR. ZELLERS:	21	•
22	Q. In the papers and publications	23	Q. Did you review documents
23	that you have identified in your curriculum		relating to any fragrance chemicals that are
24	vitae, Exhibit 3, do you ever recall citing	24	contained in or that you believe are
	Page 71		Page 73
1	to company witness deposition testimony?	1	contained in the talcum powder?
2	A. I don't typically cite	2	A. Yes. I did review some lists
3	deposition testimonies in published papers.	3	and, of course, Dr. Crowley's report.
4	Q. You cite to various company	4	Q. Do you have any idea or
5	documents. This is on pages 29 to 30 of	5	understanding as to the amount or amounts of
6	Exhibit 4, your list of literature; is that	6	the fragrance chemicals that are contained in
7	right?	7	the talcum powder in either the Johnson &
8	A. Yes.	8	Johnson Consumer company talcum powder that's
9	Q. Did you rely on these documents	9	involved in this litigation?
10	in formulating your opinions?	10	MS. O'DELL: Object to the
11	A. Yes.	11	form.
12	Q. Were these documents selected	12	MR. ZELLERS: Let me withdraw
13	for you by plaintiffs' counsel?	13	that.
14	A. Yes, they were.	14	BY MR. ZELLERS:
15	Q. Are you able to identify what	15	Q. Do you know or have any
16	each of the documents are?	16	understanding as to the amounts of fragrance
17	MS. O'DELL: Based on the Bates	17	chemicals that are in the talcum powder?
18	number?	18	A. I do not have the specific
19	MR. ZELLERS: Based on the	19	formulation or quantities of those substances
20	Bates numbers.	20	that contributed to the products.
21	A. No, I am not. I would have to	21	Q. Do
22	look at each individual document to refresh	22	MS. O'DELL: Excuse me.
		1	
23	my memory as to what it contains	1 24	MIR THITHES: Mic Crinell
23 24	my memory as to what it contains.	23 24	MR. ZELLERS: Ms. O'Dell, please, I'm going to let the doctor

	Page 74		Page 76
1	finish.	1	understanding of business practices and these
2	MS. O'DELL: In that instance,	2	types of industries, I've reviewed an
3	·	3	extremely small percentage of those.
3 4	I don't know that he was, and so if he	4	Q. Is it your practice in your
5	was, my apologies.	5	academic work or your clinical research work
6	MR. ZELLERS: It's okay. MS. O'DELL: I've been on my	6	to rely on internal company documents?
7	•	7	A. Yes, it is.
8	best behavior today, as you know, so but I don't want the witness to	8	
9	feel as if they're being cut off, and	9	Q. Do you rely on internal company documents when you publish papers?
10	because Dr. Carson is a very polite	10	A. In some cases.
11	gentlemen, he would let you interrupt	11	Q. Can you tell me in what cases
12	him.	12	or instances you have relied on internal
13	MR. ZELLERS: Of course.	13	· · · · · · · · · · · · · · · · · · ·
14	MS. O'DELL: And I don't think	14	company documents in your publications?  A. Well, for example, I did I
15	that's fair.	15	A. Well, for example, I did I was involved in some research work in
16		16	
17	So, Dr. Carson, if you're finished, great. If you're not, you	17	conjunction with NIOSH at the O.M. Scott
18	may continue.	1	Company at Marysville, Ohio, where we did
19		18	a we performed a research in the company
20	A. Well, I was going to say that my opinion is that there are very small	19 20	and relied on some internal documents in
21	quantities of those substances that	20	terms of gauging concentrations, industrial
22		1	hygiene records and so forth, in order to
23	contribute to the fragrance component. BY MR. ZELLERS:	22	draw conclusions that were pertinent to those
24		23	publications.
24	Q. Do you know how those	24	Q. Was that data or were those
	Page 75		Page 77
1	_	1	
1 2	Page 75 quantities of fragrance chemicals may have changed over the years?	1 2	Page 77 internal communications that you relied on? A. They were both.
	quantities of fragrance chemicals may have	1	internal communications that you relied on?
2	quantities of fragrance chemicals may have changed over the years?	2	internal communications that you relied on?  A. They were both.
2 3	quantities of fragrance chemicals may have changed over the years?  A. My understanding is they have	2	internal communications that you relied on?  A. They were both.  Q. What is the publication on your
2 3 4	quantities of fragrance chemicals may have changed over the years?  A. My understanding is they have not changed dramatically, but there have been	2 3 4	internal communications that you relied on?  A. They were both.  Q. What is the publication on your  CV where you relied on those materials?
2 3 4 5	quantities of fragrance chemicals may have changed over the years?  A. My understanding is they have not changed dramatically, but there have been certain substitutions over time.	2 3 4 5	internal communications that you relied on?  A. They were both.  Q. What is the publication on your  CV where you relied on those materials?  A. Well, let me see here. I think
2 3 4 5 6	quantities of fragrance chemicals may have changed over the years?  A. My understanding is they have not changed dramatically, but there have been certain substitutions over time.  Q. Do you agree that to the extent	2 3 4 5 6	internal communications that you relied on?  A. They were both. Q. What is the publication on your CV where you relied on those materials? A. Well, let me see here. I think the first author looking back here the
2 3 4 5 6 7	quantities of fragrance chemicals may have changed over the years?  A. My understanding is they have not changed dramatically, but there have been certain substitutions over time.  Q. Do you agree that to the extent that you have reviewed internal documents,	2 3 4 5 6 7	internal communications that you relied on?  A. They were both.  Q. What is the publication on your  CV where you relied on those materials?  A. Well, let me see here. I think the first author looking back here the first author would be Jim Lockey.
2 3 4 5 6 7 8	quantities of fragrance chemicals may have changed over the years?  A. My understanding is they have not changed dramatically, but there have been certain substitutions over time.  Q. Do you agree that to the extent that you have reviewed internal documents, either of Imerys or from Johnson & Johnson	2 3 4 5 6 7 8	internal communications that you relied on?  A. They were both.  Q. What is the publication on your  CV where you relied on those materials?  A. Well, let me see here. I think the first author looking back here the first author would be Jim Lockey.  Q. Looking at page 6?
2 3 4 5 6 7 8 9 10	quantities of fragrance chemicals may have changed over the years?  A. My understanding is they have not changed dramatically, but there have been certain substitutions over time.  Q. Do you agree that to the extent that you have reviewed internal documents, either of Imerys or from Johnson & Johnson companies, that you have only reviewed the documents that were hand-selected by the plaintiff lawyers for you to review?	2 3 4 5 6 7 8 9 10	internal communications that you relied on?  A. They were both. Q. What is the publication on your CV where you relied on those materials? A. Well, let me see here. I think the first author looking back here the first author would be Jim Lockey. Q. Looking at page 6? A. It's on page 6, and the there are two publications there. One is Pulmonary Changes After Exposure to
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	Page 78		Page 80
1	MS. O'DELL: Object to the	1	department?
2	form.	2	A. She's in my department, yes.
3	A. I don't agree that that's the	3	Q. You understand she's a
4	case because I am capable of understanding	4	lawyer strike that.
5	that it's a subset of available information,	5	You understand she's an expert
6	and I can make a reliable determination on	6	for the plaintiffs in this litigation?
7	the pertinence of that material regardless.	7	A. I didn't know that.
8	BY MR. ZELLERS:	8	Q. Dr. Ness never told you that
9	Q. Without looking at any other	9	she was an expert witness for plaintiffs in
10	documents or any documents that may put the	10	this matter?
11	documents you were provided in context?	11	A. No, we didn't discuss this
12	MS. O'DELL: Object to the	12	case. We only discussed the issue.
13	form.	13	
14		14	Q. Any other colleagues that you
	A. It depends on the specific		discussed your report and opinions with?
15	case, but I would say in most cases, yes.	15	MS. O'DELL: Object to the
16	BY MR. ZELLERS:	16	form.
17	Q. In this case, it was not	17	A. I think I shared some of my
18	necessary for you to look at any documents	18	thinking with the occupational medicine
19	other than those specific documents the	19	residents as a group and asked them to
20	plaintiffs provided to you; is that your	20	consider certain issues in the case.
21	testimony?	21	BY MR. ZELLERS:
22	MS. O'DELL: Object to the	22	Q. Did they contribute to your
23	form.	23	review and analysis and opinions?
24	A. Regarding the contribution to	24	A. We had an interesting
	D 70		
	Page 79		Page 81
1		1	
1 2	my opinions, I would say, yes, it was not	1 2	discussion, but I don't think that changed my
			discussion, but I don't think that changed my opinions in any way.
2	my opinions, I would say, yes, it was not necessary. BY MR. ZELLERS:	2	discussion, but I don't think that changed my opinions in any way.  Q. The opinions that you're
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		1	
İ	Page 82		Page 84
1	perineal use of talcum powder results in	1	MS. O'DELL: Object to the
2	direct exposure to the ovaries either via	2	form.
3	inhalation or migration through the female	3	A. It's an anatomical fact. The
4	reproductive tract, correct?	4	physiology of the reproductive system does
5	A. I would not phrase the opinion	5	not provide the ovaries with the kind of
6	in that way, but in general, that is my	6	clearance system that, for example, the lungs
7	opinion, yes.	7	would have for inhaled exposures.
8	Q. How would you phrase your	8	BY MR. ZELLERS:
9	second opinion?	9	Q. The words "no intrinsic
10	A. I think my second opinion	10	elimination system," are those your words or
11	relates mostly to the direct exposure to the	11	are those words that you've seen reported in
12	reproductive tract that perineal use of	12	another study or another paper?
13	talcum powder produces.	13	A. I think that's a fairly generic
14	Q. Are you opining as to	14	description, that those are my words.
15	inhalation as an exposure of talcum powder to	15	Q. Your fourth opinion is that you
16	women's ovaries?	16	believe that the epidemiological studies on
17	MS. O'DELL: Object to the	17	talcum powder and ovarian cancer show about a
18	form.	18	30% increased risk; is that right?
19	A. Only as a secondary route of	19	A. Correct.
20	exposure.	20	MS. O'DELL: Object to the
21	BY MR. ZELLERS:	21	form.
22	Q. Is it part of your opinions or	22	BY MR. ZELLERS:
23	do you defer to other experts on inhalation?	23	Q. As you told us at the outset,
24	A. I would include that as my	24	those are all still your opinions, although
	Page 83		Page 85
1	opinion.	1	you do believe even stronger that there is a
2	Q. So you're testifying here today	2	causal association between talcum powder and
3	that the perineal use of talcum powder	3	ovarian cancer; is that right?
4	results in direct exposure to the ovaries	4	A. That's correct.
5	through migration through the female	5	Q. Have you published on your
6	reproductive tract and that inhalation also	6	theory that baby powder causes ovarian
7	results in exposure of talcum powder to the	7	cancer?
8	ovaries; is that right?	8	A. No.
9	A. That is correct, but my basic	9	Q. Do you have plans to do that?
10	opinion is that perineal use of talcum powder	10	A. Not presently.
11	exposes the entire reproductive tract,	11	Q. Have you conducted any tests or
12	including the pelvic cavity. So it's a bit	12	experiments to confirm your theory that talc
13	more extensive than your phrasing.	13	migrates to the ovaries?
14	Q. Your third opinion is very	14	MS. O'DELL: Object to the
15	similar to your first opinion, except that	15	form.
1 (	here you add that it's your opinion that the	16	A. These are conclusions that I
16	ovaries are particularly susceptible to the	17	have drawn based on published literature. I
17			
17 18	carcinogenicity of talcum powder because they	18	wouldn't characterize them as a theory. I
17		18 19	wouldn't characterize them as a theory. I think they're pretty much established fact.
17 18	carcinogenicity of talcum powder because they		
17 18 19	carcinogenicity of talcum powder because they have, in your words, "no intrinsic	19	think they're pretty much established fact. BY MR. ZELLERS: Q. I'm going to ask you about all
17 18 19 20	carcinogenicity of talcum powder because they have, in your words, "no intrinsic elimination system"; is that right?	19 20	think they're pretty much established fact. BY MR. ZELLERS: Q. I'm going to ask you about all these opinions, and so we'll go through the
17 18 19 20 21	carcinogenicity of talcum powder because they have, in your words, "no intrinsic elimination system"; is that right?  A. That's correct.	19 20 21	think they're pretty much established fact. BY MR. ZELLERS: Q. I'm going to ask you about all

	Page 86		Page 88
1	some of these matters are established fact.	1	you aware of any article that identifies
2	My question is: Did you do any	2	inflammation in a woman's reproductive tract
3	tests or experiments as part of your review	3	resulting from external genital talc
4	and analysis in this matter?	4	application?
5	A. I did not.	5	MS. O'DELL: Object to the
6	Q. Did you do any tests or	6	form.
7	experiments relating to your opinion that	7	A. I would say that the studies
8	talc causes cancer via inflammation?	8	which have looked at that have relied on the
9	A. I did not.	9	result of internal application to show
10	Q. Can you identify any article	10	migration. There have been studies that have
11	that identifies inflammation anywhere in a	11	shown inflammation as the result of tale, and
12	woman's reproductive tract that results from	12	in my opinion, external application is the
13	external genital talc application?	13	same as internal application in the
14	MS. O'DELL: Object to the	14	reproductive tract.
15	form.	15	BY MR. ZELLERS:
16	A. I think there are a number of	16	Q. I don't mean to be
17	published articles that allude to that	17	argumentative, and I don't want to be, but
18	relationship and draw a fairly strong	18	can you name me an article that identifies
19	conclusion that it exists.	19	inflammation in a woman's reproductive tract
20	MS. O'DELL: Mike, excuse me,	20	resulting from external genital talc
21	and I'm sorry to interrupt. We've	21	application?
22	been going over an hour and a half.	22	MS. O'DELL: Objection, asked
23	Are you at a point where we can take	23	and answered.
24	just a short break for	24	A. I can't specifically.
	just a short oreak for		11. I can't specifically.
	Page 87		Page 89
1		1	Page 89 MR. ZELLERS: Let's take a
1 2	MR. ZELLERS: Sure, we can.	1 2	
	MR. ZELLERS: Sure, we can. Let me just ask these couple of		MR. ZELLERS: Let's take a
2	MR. ZELLERS: Sure, we can.	2	MR. ZELLERS: Let's take a break.
2 3	MR. ZELLERS: Sure, we can. Let me just ask these couple of questions, and then we'll take a	2 3	MR. ZELLERS: Let's take a break.  THE VIDEOGRAPHER: We're off the record, 10:37, end of Tape 1.
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	Page 90		Page 92
1	Q. Did you strike that.	1	MR. ZELLERS: I'm asking the
2	Are you familiar with the	2	doctor a question.
3	Center for Disease Control in the United	3	MS. O'DELL: Okay.
4	States?	4	MR. ZELLERS: So
5	A. Yes.	5	MS. O'DELL: That's specific
6	Q. Did you review the CDC and its	6	language, and if you have specific
7	position on any relationship between talcum	7	language that you're reading from the
8	powder and ovarian cancer?	8	report or you've taken from the
9	A. That may have been part of my	9	report, I would just ask that you show
10	review, but I don't specifically recall now	10	the doctor.
11	what the CDC has on that issue.	11	MR. ZELLERS: Ms. O'Dell, I
12	Q. CDC does not list talc or	12	have my question. I'm asking my
13	talcum powder as a risk factor for ovarian	13	question. The doctor can either
14	cancer, correct?	14	answer my question or not answer my
15	A. It's quite possible.	15	question. I'm not reading from a
16	Q. Mayo Clinic and a number of	16	document. I'm reading from my notes.
17	medical centers do not list talc as a risk	17	MS. O'DELL: I object to the
18	factor for ovarian cancer, correct?	18	form of the question. I think it's
19	A. That may be true.	19	unfair.
20	Q. Did you consider, or are you	20	MR. ZELLERS: Can you answer
21	familiar with the National Cancer Institute?	21	that question, Doctor?
22	A. I am.	22	A. I would agree that that
23	Q. National Cancer Institute is a	23	restates the general opinion of the NCI as
24	leading health authority in the United	24	published, but in order to verify the
	Page 91		Page 93
1	States; is that right?	1	specific wording, I would need to look at the
2	A. Yes.	2	document.
3	Q. Particularly in the area of	3	BY MR. ZELLERS:
4	cancer and materials that may or may not be	4	Q. Why would you rely on
5	carcinogenic; is that right?	5	Health Canada but not these other public
6	A. Well, the National Cancer	6	health organizations, including Center for
7	Institute is responsible for guiding national	7	Disease Control and the National Cancer
8	research policies as it relates to cancers,	8	Institute?
9	and that's one of their considerations is	9	A. Well, there are a number of
10	substances that may be related to cancer.	10	reasons. There are lots of public health
11	Q. When you reviewed what the	11	organizations. Many of them have different
12	National Cancer Institute has determined with	12	interests and different approaches in the way
13	respect to talcum powder and whether or not	13	that they address problems. For example,
14	it is a risk factor for ovarian cancer, what	14	discussing the National Cancer Institute, its
15	did you find?	15	primary focus is on research and treatments
16	A. The most recent publication	16	regarding cancers, not necessarily causes,
1 17		17	but it is a funder of basic research in the
17	that I viewed discounts the relationship.		T I:4- 1 C4-4
18	Q. In fact, the National Cancer	18	United States.
18 19	Q. In fact, the National Cancer Institute has concluded that the weight of	18 19	Health Canada is an
18 19 20	Q. In fact, the National Cancer Institute has concluded that the weight of the evidence does not support an association	18 19 20	Health Canada is an organization whose charge is to is to
18 19 20 21	Q. In fact, the National Cancer Institute has concluded that the weight of the evidence does not support an association between perineal talc exposure and increased	18 19 20 21	Health Canada is an organization whose charge is to is to synthesize public health-related positions
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18 19 20 21 22	Q. In fact, the National Cancer Institute has concluded that the weight of the evidence does not support an association between perineal talc exposure and increased risk of ovarian cancer; is that right?	18 19 20 21 22	Health Canada is an organization whose charge is to is to synthesize public health-related positions based on evidence and disseminate those to

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8		The state of the s		
10   right?   10   MS. O'DELL: Object to the   11   MS. O'DELL: Object to the   12   form.   12   ms. of '19; it may be. But it's still not based   15   or the most recently available literature.   16   Or the were you involved in the Health Canada risk assessment prior to its   Or the lath to canada risk assessment   Or th				
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9 form. 10 Q. Does the National Cancer 11 Institute review the peer-reviewed literature 12 as it relates to risk factors for ovarian 13 cancer? 14 A. They have a number of 15 committees that are set up for that purpose, 16 and it is it's a committee approach which 17 is handled by a committee chairperson. The 18 National Cancer Institute itself has some 19 oversight of that process, but they defer to 20 the committee chairs. 21 Q. You understand that the Health 22 Canada assessment is a draft; is that right? 23 A. Yes.  9 form. A. Yes.  10 A. Yes.  9 form. A. Yes.  11 BY MR. ZELLERS:  12 Q. Are you familiar with the Procautionary principle?  A. I am. Q. What is the precautionary principle?  A. The precautionary principle states that changes should take place in the face of a potential hazard until that hazard is proved not to exist. It's a general precept that's used in the EU, for example, and very different from the one that operates in this country.	8		8	
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Canada assessment is a draft; is that right?  22 and very different from the one that operates 23 A. Yes.  23 in this country.			I .	
23 A. Yes. 23 in this country.			1	
			1	
Q. The principle in this country				•
	41	Q. I on understand that it's at the		Q. The principle in this country

	Page 98		Page 100
1	is that there needs to be scientific evidence	1	Did I read that correctly?
2	in order to take action; is that right?	2	A. You did.
3	MS. O'DELL: Object to the	3	Q. Is that your understanding of
4	form.	4	what a precautionary approach is?
5	A. Yes, that's correct.	5	A. Yes. In general, the
6	BY MR. ZELLERS:	6	precautionary principle can be restated that
7	Q. The precautionary principle	7	an ounce of prevention is worth a pound of
8	says even before there's full or complete	8	cure.
9	scientific demonstration of cause and effect,	9	Q. Health Canada does not require
10	it is appropriate to take a precautionary	10	a finding of causation such as required in
11	approach; is that right?	11	litigation matters in this country, the
12	A. That's right.	12	United States; is that right?
13	Q. The Health Canada follows	13	A. In order to adopt a document
14	strike that.	14	that has a significant effect on general
15	Health Canada follows and has	15	public health practices, no, it does not.
16	adopted a precautionary approach; is that	16	Q. The Taher paper, that's another
17	right?	17	paper that you have reviewed since you
18	A. Yes.	18	published your report; is that right?
19	Q. Please review	19	A. Which paper? I'm sorry.
20	Deposition Exhibit 14.	20	Q. This is what we've marked as
21	(Carson Deposition Exhibit 14	21	Exhibit 7. You brought it with you here
22	marked.)	22	today?
23	BY MR. ZELLERS:	23	A. Okay. Yes.
24	Q. Deposition Exhibit 14 is the	24	Q. You've read the Taher 2018
	Page 99		Page 101
1	H 14 C 1 D '' M1' E 1 C	l	
	Health Canada Decision-Making Framework for	1	manuscript; is that right?
2	Identifying, Assessing and Managing Health	1 2	manuscript; is that right? A. Yes.
		l	
2	Identifying, Assessing and Managing Health	2	A. Yes.
2 3	Identifying, Assessing and Managing Health Risk.	2 3	A. Yes. Q. Where did you obtain that
2 3 4	Identifying, Assessing and Managing Health Risk.  Do you see that?	2 3 4	A. Yes. Q. Where did you obtain that manuscript from?
2 3 4 5	Identifying, Assessing and Managing Health Risk.  Do you see that?  A. Yes.	2 3 4 5	A. Yes. Q. Where did you obtain that manuscript from? A. This was obtained directly from
2 3 4 5 6	Identifying, Assessing and Managing Health Risk.  Do you see that?  A. Yes. Q. If you go to page 5 of	2 3 4 5 6	A. Yes. Q. Where did you obtain that manuscript from? A. This was obtained directly from one of the coauthors on this study to the
2 3 4 5 6 7	Identifying, Assessing and Managing Health Risk.  Do you see that?  A. Yes.  Q. If you go to page 5 of Exhibit 14  MS. O'DELL: Feel free to take review the document if you're	2 3 4 5 6 7 8 9	A. Yes. Q. Where did you obtain that manuscript from? A. This was obtained directly from one of the coauthors on this study to the plaintiffs' attorneys, who passed it along to me. Q. So one of the coauthors on this
2 3 4 5 6 7 8	Identifying, Assessing and Managing Health Risk.  Do you see that?  A. Yes. Q. If you go to page 5 of Exhibit 14  MS. O'DELL: Feel free to take review the document if you're not familiar with it, Dr. Carson.	2 3 4 5 6 7 8 9	A. Yes. Q. Where did you obtain that manuscript from? A. This was obtained directly from one of the coauthors on this study to the plaintiffs' attorneys, who passed it along to me. Q. So one of the coauthors on this study gave it to the plaintiffs' counsel, who
2 3 4 5 6 7 8 9 10	Identifying, Assessing and Managing Health Risk.  Do you see that?  A. Yes. Q. If you go to page 5 of Exhibit 14  MS. O'DELL: Feel free to take review the document if you're not familiar with it, Dr. Carson.  BY MR. ZELLERS:	2 3 4 5 6 7 8 9 10	A. Yes. Q. Where did you obtain that manuscript from? A. This was obtained directly from one of the coauthors on this study to the plaintiffs' attorneys, who passed it along to me. Q. So one of the coauthors on this study gave it to the plaintiffs' counsel, who then gave it to you; is that right?
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2 3 4 5 6 7 8 9 10 11 12 13 14 15	Identifying, Assessing and Managing Health Risk.  Do you see that?  A. Yes. Q. If you go to page 5 of Exhibit 14  MS. O'DELL: Feel free to take review the document if you're not familiar with it, Dr. Carson. BY MR. ZELLERS: Q. One of the underlying principles in the Health Canada decision-making framework is use a precautionary approach; is that right? A. That's right. Q. If we go to page 8, Health	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	A. Yes. Q. Where did you obtain that manuscript from? A. This was obtained directly from one of the coauthors on this study to the plaintiffs' attorneys, who passed it along to me. Q. So one of the coauthors on this study gave it to the plaintiffs' counsel, who then gave it to you; is that right? A. That's correct. Q. Who was the author of this publication, Exhibit 7, that provided the paper to plaintiffs' counsel, if you know? A. I don't recall. Q. But one of these authors; is
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	Alch I. Chip Ca		
	Page 102		Page 104
1	Q. Did you have access to the	1	A. Yes, I have.
2	appendices and supplemental tables that are	2	Q. Do you know any of the authors
3	referred to in the Taher 2018 publication	3	of this paper, Exhibit 7?
4	which we've marked as Exhibit 7?	4	A. No, I don't.
5	A. The ones that are not in	5	Q. Do you know the source of
6	this in this document or	6	funding for this paper?
7	Q. Yes.	7	A. I I think the sources of
8	A. Those I have not thoroughly	8	funding are mentioned in here.
9	examined those, but I do have access to them.	9	Q. Other than what's mentioned in
10	Q. How do you have access to those	10	the paper, Exhibit 7, do you have any
11	appendices and supplemental tables?	11	knowledge as to the sources of funding?
12	A. They were also provided to me	12	A. There's a combination of
13	by plaintiffs' counsel.	13	sources. In part, this work is funded
14	Q. Has the Taher publication,	14	through the plaintiffs' attorneys.
15	which we've marked as Exhibit 7, been peer	15	Q. Have you communicated with any
16	reviewed?	16	of the authors of this paper?
17	A. It's in the process. This is a	17	A. No.
18	manuscript that's just been accepted for	18	Q. Do you know the credentials of
19	publication, so it has gone through peer	19	any of the authors of this paper?
20	review.	20	A. I haven't investigated that.
21	Q. It has gone through peer	21	Q. In your epidemiological work
22	review	22	outside of litigation, do you rely on
23	A. That's my understanding.	23	articles that are funded at least in part by
24	Q and Exhibit 7 is the article	24	plaintiffs' counsel in litigation?
	Page 103		Page 105
1	that you believe will be published; is that	1	A. If the articles represent good
2	right?	2	science, I don't really pay much attention or
3	A. This is a this is a working	3	worry about the funding source.
4	manuscript which has gone through at least	4	Q. Do you know what conflicts of
5	part of the peer-review process. There may	5	interest any of the authors have?
6	be minor edits that occur to this, but this	6	A. I don't know specifically. I
7	is substantially the final article.	7	can't recall if they're outlined in here.
8	Q. How do you know that?	8	But the those are also evaluated based on
9	A. That's the general process of	9	the peer-review process.
10	submitting publications to peer-reviewed	10	Q. Do you know whether some of the
11	article journals.	11	authors are serving as consultants to
12	Q. How do you know I'm sorry,	12	plaintiffs' counsel in this litigation?
13	did you finish?	13	A. I know that no, I don't know
14	A. I'm finished.	14	that. Excuse me, I gave an incorrect answer.
15	Q. How did you know the status of	15	Q. Sure. Correct it, please.
16	the peer-review process with respect to	16	A. I mentioned that part of the
17	Exhibit 7?	17	funding for this research came from
18	A. Because it's been accepted for	18	plaintiffs' counsel, and I'm not I don't
19	publication.	19	know that that's the case. I was thinking of
20	Q. How do you know that?	20	another research report when I said that.
21	A. That, I was told by the	21	Q. Do you know whether or not, at
22	plaintiffs' attorneys.	22	least in part, funding for this paper, the
23	Q. And you've accepted that; is	23	Taher paper, came from plaintiffs' counsel?
24	that right?	24	A. No, I don't.
2 1			,

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	Page 106		Page 108
1	Q. Taher, this paper, Exhibit 7,	1	factors is consistency; is that right?
2	concludes that asbestos contamination does	2	A. Yes.
3	not explain ovarian cancer, correct?	3	Q. You, in fact, are opining in
4	A. It does come to that general	4	this case that there is consistency among the
5	conclusion.	5	talcum powder ovarian cancer studies and
6	Q. That's a different conclusion	6	publications; is that right?
7	than you have formulated in this matter; is	7	A. Yes.
8	that right?	8	Q. The authors of the Taher paper
9	A. No, it's not.	9	disagree with that conclusion; is that right?
10	Q. You agree that asbestos	10	MS. O'DELL: Object to the
11	contamination does not explain ovarian	11	form.
12	cancer; is that right?	12	A. I don't think they disagree
13	A. It doesn't completely explain	13	with that.
14	ovarian cancer.	14	BY MR. ZELLERS:
15	Q. Does it explain ovarian cancer?	15	Q. Turn to page 25, Table 2. This
16	MS. O'DELL: Objection, asked	16	is, again, something that you have reviewed
17	and answered.	17	in preparation for your deposition; is that
18	A. I I don't believe it	18	
19		19	right?  A. Well, I didn't review it in
	completely explains ovarian cancer, no. BY MR. ZELLERS:		· · · · · · · · · · · · · · · · · · ·
20		20	preparation for the deposition, but I've
21	Q. Turn to page 41 of Exhibit 7.	21	reviewed it recently.
22	Look at the last three lines of the paper.	22	Q. At the request of plaintiffs'
23	The authors of the Taher publication state:	23	counsel, correct?
24	The similarity of findings between studies	24	A. Yes.
	Page 107		Page 109
1	published prior to and after this point	1	Q. Table 2 is a summary of
2	suggest asbestos contamination does not	2	evidence for each of the Hill criteria of
3	explain the positive association between	3	causation as applied to perineal application
4	perineal use of talc powder and the risk of	4	of talc and ovarian cancer.
5	ovarian cancer.	5	Do you see that?
6	Did I correctly state their	6	A. Yes.
7	conclusion?	7	Q. Under Consistency, they state
8	A. Well, there was a final clause	8	that 15 out of 30 studies reported positive
9	of the sentence, but yes, you correctly read	9	and significant associations; is that right?
10	that.	10	A. Yes.
11	Q. The Taher authors also	11	Q. 15 out of 30, that's 50%,
12	discussed the lack of consistency among the	12	right?
13	various talcum powder studies; is that right?	13	A. Yes.
14	MS. O'DELL: Object to the	14	Q. 50% is no better than a coin
15	form.	15	toss; is that right?
16	A. I'm sorry, could you repeat	16	MS. O'DELL: Object to the
17	that question?	17	form.
18	BY MR. ZELLERS:	18	A. Well, I would have to also
19	Q. Sure.	19	mention that the majority of those 30 studies
	You looked at the Bradford Hill	20	found positive associations. These are the
2.0	factors in formulating your opinion; is that	21	ones that showed positive associations that
20 21			ones that showed positive associations that
21		22	rose to the level of statistical
21 22	right?	22	rose to the level of statistical
21		22 23 24	rose to the level of statistical significance.

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	Page 110		Page 112
1	BY MR. ZELLERS:	1	studies that have shown a biological gradient
2	Q. If an association is not	2	at especially in relation to some of the
3	statistically significant, then it can be due	3	subtypes of ovarian cancer.
4	to chance; is that right?	4	BY MR. ZELLERS:
5	A. But if it's due to chance over	5	Q. And I'm going to ask you about
6	and over and over again, and you keep getting	6	those questions, but right now I'm just
7	a positive association, that argues very	7	asking you about the Taher paper.
8	strongly against the chance as being the only	8	A. Well, I'm trying to just
9	factor.	9	completely answer your question.
10	Q. Can you answer my question: A	10	Q. I'm asking you about the Taher
11	lack of a statistically significant	11	paper. You understand?
12	association is consistent with or can be	12	A. Yes. This is all from the
13	consistent with no risk, correct?	13	Taher paper that I read you.
14	MS. O'DELL: Objection to form,	14	Q. Section 3.3.1 talks about
15	asked and answered.	15	evidence from human studies. That's on
16	A. If you're referring to an	16	page 20; is that right?
17	individual study, that might be the case;	17	A. Yes.
18	however, when considering the Bradford Hill	18	Q. This section talks about
19	criterion of consistency, you look at the	19	whether or not there is a consistent
20	overall body of the literature and what it	20	dose-response found in those studies; is that
21		21	
22	tells you.  There's an obvious statistical	22	right?  MS. O'DELL: What sentence are
23	trend toward positive connection between	23	
23 24	talcum powder perineal application and the	24	you pointing to?
24	taleum powder permear application and the	24	MR. ZELLERS: I'm asking the
	Page 111		Page 113
1	occurrence of ovarian cancer, and the more	1	doctor questions based upon his review
2	evidence that mounts, the more strongly that	2	of the paper, Ms. O'Dell.
3	association is proven.	3	MS. O'DELL: Okay. Feel free
4	BY MR. ZELLERS:	4	to review it, Doctor, if you need to.
5	Q. Would you say that 15 out of 30	5	THE WITNESS: I'm just taking a
6	means there are consistent results across	6	look at this section.
7	studies?	7	BY MR. ZELLERS:
8	A. I think I've just explained to	8	Q. And if it helps you, look on
9	you how I believe there are consistent	9	page 21, lines 174 through 177.
10	results across studies.	10	(Document review.)
11	Q. The authors of the Taher paper	11	BY MR. ZELLERS:
12	also conclude that they do not find a	12	Q. I only want to ask you about
13	consistent dose-response in the papers that	13	two sentences. Are you ready for me to ask
14	look at perineal application of talc and	14	you my question?
15	ovarian cancer; is that right?	15	A. Just one moment, please.
16	MS. O'DELL: Object to the	16	Q. Sure.
17	form.	17	(Document review.)
18	A. Well, what they actually say is	18	THE WITNESS: All right, I'm
19	that about half of the epidemiological	19	ready for your question.
20	studies assess only one level of talc	20	BY MR. ZELLERS:
21	exposure, ever versus never. So it's not	21	Q. The Taher paper states that
22	possible from those studies to establish a	22	many of the studies only reported on the
23	biological gradient.	23	ovarian cancer risk assessing one exposure
24	However, there are a number of	24	category and that exposure response analyses
	,	1	5 , 1

were not done in all studies; is that right?	1	inflammation in the tissues in which it
A. Yes.	2	sequesters; is that right?
O. When conducted, findings from		A. Yes.
		Q. Assuming for the moment that
•		talc can reach the ovaries, is it your
		opinion that talc produces chronic
form.		inflammation in the ovaries and that this
A. Yes.		somehow leads to ovarian cancer?
BY MR. ZELLERS:		A. It is my opinion that talc
		produces chronic inflammation in the
		epithelial tissues of the ovaries and
	1	surrounding epithelial tissues and leads to
		both carcinogenesis initiation and promotion.
		Q. There are no reports in the
•		literature of externally applied talc leading
		to inflammation, granulomas, fibrosis or
	1	adhesions anywhere along a woman's
	1	reproductive tract, correct?
		MS. O'DELL: Object to the
		form, asked and answered.
	1	A. Well, that's similar to the
	1	question that you asked earlier, and although
		I'm not aware of experimental reports that
	1	specifically jive with that condition,
and other elemicals mensity the	21	specifically five with that condition,
Page 115		Page 117
inflammatory response and stimulate cell	1	certainly there are a lot of theoretical
growth and proliferation; is that right?	2	reports that have been published.
A. Yes.	3	For example, Dr. Ness' article
Q. Other than asbestos, what	4	from '99 lays out the theory of inflammation
mineral fibers in talc intensify the	5	and relates that to talc exposure from
inflammatory response?	6	perineal application.
A. Well, the endogenous fibrous	7	BY MR. ZELLERS:
talc fibers also intensify the response.	8	Q. This is your colleague,
Q. Other than asbestos and fibrous	9	Dr. Ness; is that right?
talc fibers, what mineral fibers in talc do	10	A. Ness, and Coussens, when she
you believe intensify the inflammatory	11	was at Pittsburgh.
response?	12	Q. Dr. Ness, you showed her your
A. I'm not really able to answer	13	report and asked for her comments; is that
that question because I don't have a specific	14	right?
opinion about it. I'm not a geologist.	15	A. I didn't show her the report.
Q. Are the other chemicals that	16	Q. Well, you talked to her about
you refer to in this section fragrance	17	and showed her your conclusions and your
chemicals?	18	opinions; is that right?
A. Yes.	19	A. No, I talked to her about the
	20	paper.
	21	Q. Her paper?
	22	A. Yes.
added.		A. 1 cs.
Q. You claim, again on page 7,	23	Q. Did you share with her that you
_	Q. When conducted, findings from trend analyses were not consistent; is that correct?  MS. O'DELL: Object to the form.  A. Yes. BY MR. ZELLERS: Q. All right. With respect I'm done with that paper. You discuss your opinion number 1 on page 7 of your report; is that right?  A. Yes. Q. You first state on page 7 that you believe talcum powder is immunogenic and produces chronic inflammation in the tissues; is that right?  A. Yes. Q. You state that other components in talcum powder, including mineral fibers, asbestos, fibrous tale, carcinogenic metals and other chemicals intensify the  Page 115  inflammatory response and stimulate cell growth and proliferation; is that right?  A. Yes. Q. Other than asbestos, what mineral fibers in talc intensify the inflammatory response?  A. Well, the endogenous fibrous tale fibers also intensify the response. Q. Other than asbestos and fibrous tale fibers, what mineral fibers in talc do you believe intensify the inflammatory response?  A. I'm not really able to answer that question because I don't have a specific opinion about it. I'm not a geologist. Q. Are the other chemicals that you refer to in this section fragrance chemicals? A. Yes. Q. Any others?	Q. When conducted, findings from trend analyses were not consistent; is that correct?  MS. O'DELL: Object to the form.  A. Yes.  BY MR. ZELLERS: Q. All right. With respect I'm done with that paper. You discuss your opinion 12 number 1 on page 7 of your report; is that right?  A. Yes. Q. You first state on page 7 that you believe talcum powder is immunogenic and produces chronic inflammation in the tissues; is that right?  A. Yes. Q. You state that other components in talcum powder, including mineral fibers, asbestos, fibrous talc, carcinogenic metals and other chemicals intensify the  Page 115  inflammatory response and stimulate cell growth and proliferation; is that right?  A. Yes. Q. Other than asbestos, what mineral fibers in talc intensify the inflammatory response?  A. Well, the endogenous fibrous talc fibers also intensify the response. Q. Other than asbestos and fibrous talc fibers, what mineral fibers in talc do you believe intensify the inflammatory response?  A. I'm not really able to answer that question because I don't have a specific opinion about it. I'm not a geologist. Q. Are the other chemicals that you refer to in this section fragrance chemicals?  A. Yes. Q. Any others?

	Dago 110		Daga 120
_	Page 118		Page 120
1	in this litigation?	1	tale relating to that, and to my knowledge,
2	A. No, I didn't.	2	there are no experimental reports or case
3	Q. Did she wonder or ask why it	3	reports that can document that at the current
4	was that you were researching or looking into	4	time.
5	this issue?	5	Q. Granulomas, fibrosis and
6	A. She I think she may have,	6	adhesions do not cause ovarian cancer,
7	yeah.	7	correct?
8	Q. And what did you tell her?	8	MS. O'DELL: Object to the
9	A. I told her I had been recently	9	form.
10	asked to look into it.	10	A. The inflammatory process that
11	Q. Did you tell her that you'd	11	is intimately connected with granuloma
12	been asked to look into it by counsel for	12	formation may well be the same process that
13	plaintiffs in the talc litigation?	13	results in mutation and promotion of ovarian
14	A. No, I didn't.	14	cancer. So I I could not agree completely
15	Q. And that never came up; is that	15	with your statement.
16	right?	16	BY MR. ZELLERS:
17	A. It didn't.	17	Q. Is there a good scientific
18	Q. And she never talked to you or	18	basis today to opine that granulomas,
19	told you about her experience and her work as	19	fibrosis or adhesions cause ovarian cancer?
20	counsel strike that, as an expert for	20	MS. O'DELL: Object to the
21	plaintiffs; is that your testimony?	21	form.
22	A. Yes. It was a very brief	22	A. No, I don't think they cause
23	conversation.	23	ovarian cancer.
24	Q. If up to 50% of all U.S. women	24	///
	Page 119		Page 121
1	have used genital talc, shouldn't there be	1	BY MR. ZELLERS:
2	studies which have shown inflammation,	2	Q. Would you agree that not all
3	granulomas, fibrosis or adhesions in a	3	inflammatory conditions lead to cancer?
4	woman's reproductive tract?	4	A. Yes.
5	MS. O'DELL: Object to the	5	Q. It's true that all of us
6	form.	6	experience inflammatory reactions of one sort
7	A. Well, there are studies that	7	or another, including chronic conditions,
8	show those things.	8	that do not lead to cancer, correct?
9	BY MR. ZELLERS:	9	A. That's correct. Although there
10	Q. Please, tell me the published	10	is a strong relationship between inflammatory
11	studies that demonstrate inflammation,	11	processes and the occurrence of cancers, and
12	granulomas, fibrosis or adhesions in a	12	some of those inflammatory diseases that
13	woman's reproductive tract from externally	13	you're referring to also have associations
14	applied talc?	14	with increased rates of cancers.
15	A. Well, you're adding a new	15	MR. ZELLERS: Move to strike as
16	condition now.	16	nonresponsive.
17	Q. I'm sorry if I didn't add that	17	BY MR. ZELLERS:
18	before.	18	Q. Rheumatoid arthritis is an
19	A. There are multiple studies that	19	inflammatory condition; is that right?
20	show inflammation and other inflammatory	20	A. Yes, it is.
21	reactions in connection with the occurrence	21	Q. Does it increase the risk of
22	of ovarian cancer.	22	ovarian cancer?
		23	A. I think I it does it's
2.3			
23 24	The piece that you're now asking for is the external application of	24	not associated with ovarian cancer, but I

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	Page 122		Page 124
1	think it may be associated with other	1	A. This is a list that I've put
2	cancers.	2	together of some of the studies I've
3	Q. Does strike that.	3	considered and how they relate to things I
4	Is psoriasis an inflammatory	4	might testify to today.
5	condition?	5	Q. Why did you not tell me about
6	A. Generally, it is.	6	your list that you brought with you today
7	Q. Is it associated with an	7	before now?
8	increased risk of ovarian cancer?	8	A. Well, I'm telling you about it
9	A. Not that I'm aware.	9	now.
10	Q. In your report you state that	10	Q. My question is why did you not,
11	inflammation is a normal body process that	11	when I asked you what you brought to the
12	leads to the thwarting of infection and rapid	12	deposition today, not take the list out and
13	healing; is that right?	13	show us the list?
14	A. That's correct.	14	A. I didn't think of it.
15	Q. If your inflammation theory is	15	Q. Okay. We'll mark your list as
16	correct, why doesn't inflammation generally,	16	Deposition Exhibit 15.
17	such as in pelvic inflammatory disease, cause	17	(Carson Deposition Exhibit 15
18	ovarian cancer?	18	marked.)
19	A. It may do so.	19	BY MR. ZELLERS:
20	Q. You are opining under oath here	20	Q. These are a number of notes,
21	that pelvic inflammatory disease causes	21	four pages of notes. Are these all your
22	ovarian cancer?	22	notes?
23	A. I think there are experts who	23	A. Yes.
24	have concluded that.	24	Q. First page has got a section of
	Page 123		Page 125
1	Q. What study are you relying on	1	articles on asbestos and ovarian cancer; is
2	for that opinion or statement?	2	that right?
3	A. That's not part of the opinions	3	A. Yes.
4	that I've been asked to consider in this	4	Q. It also has inflammation and
5	in this case.	5	cancer and a number of studies; is that
6	Q. As you sit here, can you cite	6	right?
7	me a publication or a study that finds that	7	A. Yes.
8	pelvic inflammatory disease causes ovarian	8	Q. Second page has got cohort,
9	cancer?	9	where you've listed out the four cohort
10	MS. O'DELL: Object to the	10	studies; is that right?
11	form.	11	A. Yes.
12	A. Well, I have I have a list	12	Q. Beneath that are the
13	of studies that relate inflammation to	13	meta-analyses where you've listed those out
14	ovarian cancer and other cancers.	14	and made some notes on those, correct?
15	BY MR. ZELLERS:	15	A. Yes.
16	Q. Can you name me a study or a	16	Q. The back page of the second
17	publication?	17	page has got a listing of a number of the
18	A. Okay. I think I have my list	18	case-control studies, correct?
19	here.	19	A. Yes. Those are duplicated on
20	Q. You brought other materials	20	another page.
21	with you?	21	Q. The third page has got a
22	A. I brought this list.	22	section on migration and studies that you're
0.0			
23	Q. All right. Well, what list are	23	looking at for that proposition, correct?
23 24	Q. All right. Well, what list are you pulling out of your pocket?	23	A. Correct.

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1	Q. Underneath that, ovarian cancer	1	authors conclude that pelvic inflammatory
2	risk; is that right?	2	disease causes ovarian cancer? Do you
3	A. Yes.	3	believe each of the authors in the studies
4	Q. Underneath that, talc and other	4	that you've identified, that their studies
5	cancer; is that right?	5	stand for that proposition?
6	A. Yes.	6	MS. O'DELL: Object to form,
7	Q. And then on the last page,	7	asked and answered.
8	page 4, is a listing of the case-control	8	A. I think all of the studies that
9	studies with the odds ratios and confidence	9	I've identified for this question do allude
10	intervals; is that right?	10	to that, yes.
11	A. For the most part, yes.	11	BY MR. ZELLERS:
12		12	
13			Q. That pelvic inflammatory
14	your list of studies that you have prepared,	13	disease causes ovarian cancer, correct?
	which study demonstrates or supports the	14	A. That it is a it's a factor,
15	proposition that pelvic inflammatory disease	15	yes.
16	causes ovarian cancer?	16	Q. It's a cause. That's what they
17	A. Looking through here, I don't	17	state in those papers, right?
18	have that item specifically in my notes, but	18	MS. O'DELL: Object to the
19	I'm just using my notes to refresh my memory	19	form.
20	about the individual research report. I	20	BY MR. ZELLERS:
21	think the Coussens and Werb paper from 2010	21	Q. That's your testimony?
22	talks about general mechanisms of	22	MS. O'DELL: Excuse me,
23	inflammation in relation to the occurrence of	23	misstates his testimony. Object to
24	ovarian cancer.	24	the form.
	Page 127		Page 129
1	And there's the Ness and	1	A. I would say it's a factor and
2	Cottreau paper from '99.	2	leave it at that.
3	Okada has discussed it in the	3	BY MR. ZELLERS:
4	2007 paper. And there's a paper from 2001	4	Q. All right. Are you familiar
5	which is Balkwill and Mantovani which	5	with pleurodesis?
6	discusses the relationship between talc and	6	A. I am.
7	ovarian cancer and also discusses the	7	Q. Does a pleurodesis cause
8	relationship to other sources of	8	cancer?
9	inflammation.	9	A. It is not known to, although it
10	Q. Each of those papers that	10	might.
11	you've identified you believe state that	11	
12	•		Q. Are you familiar with the
<b></b>	pelvic inflammatory disease is a cause of ovarian cancer, correct?	12	study, 1979, A survey of the long-term
1 2	OVALIAN CANCEL COFFECT/	13	effects of talc and kaolin pleurodesis?
13		1 1	
14	MS. O'DELL: Object to the	14	A. Can tell me who the author of
14 15	MS. O'DELL: Object to the form.	15	A. Can tell me who the author of that was?
14 15 16	MS. O'DELL: Object to the form.  A. Well, I don't think they state	15 16	A. Can tell me who the author of that was?  Q. Sure. The author is this is
14 15 16 17	MS. O'DELL: Object to the form.  A. Well, I don't think they state that in so many words, but if you read the	15 16 17	A. Can tell me who the author of that was?  Q. Sure. The author is this is from the Research Committee of the British
14 15 16 17 18	MS. O'DELL: Object to the form.  A. Well, I don't think they state that in so many words, but if you read the paper and you understand that what pelvic	15 16 17 18	A. Can tell me who the author of that was?  Q. Sure. The author is this is from the Research Committee of the British Thoracic Association. The members of the
14 15 16 17 18	MS. O'DELL: Object to the form.  A. Well, I don't think they state that in so many words, but if you read the paper and you understand that what pelvic inflammatory disease is and its relationship	15 16 17 18 19	A. Can tell me who the author of that was?  Q. Sure. The author is this is from the Research Committee of the British Thoracic Association. The members of the subcommittee were Chappell, Johnson, Charles,
14 15 16 17 18 19 20	MS. O'DELL: Object to the form.  A. Well, I don't think they state that in so many words, but if you read the paper and you understand that what pelvic inflammatory disease is and its relationship to inflammatory processes in general, yes,	15 16 17 18 19 20	A. Can tell me who the author of that was?  Q. Sure. The author is this is from the Research Committee of the British Thoracic Association. The members of the subcommittee were Chappell, Johnson, Charles, Wagner, Seal, Berry and Nicholson.
14 15 16 17 18 19 20 21	MS. O'DELL: Object to the form.  A. Well, I don't think they state that in so many words, but if you read the paper and you understand that what pelvic inflammatory disease is and its relationship to inflammatory processes in general, yes, that's what they're saying.	15 16 17 18 19 20 21	A. Can tell me who the author of that was?  Q. Sure. The author is this is from the Research Committee of the British Thoracic Association. The members of the subcommittee were Chappell, Johnson, Charles,
14 15 16 17 18 19 20 21	MS. O'DELL: Object to the form.  A. Well, I don't think they state that in so many words, but if you read the paper and you understand that what pelvic inflammatory disease is and its relationship to inflammatory processes in general, yes, that's what they're saying.  BY MR. ZELLERS:	15 16 17 18 19 20	A. Can tell me who the author of that was?  Q. Sure. The author is this is from the Research Committee of the British Thoracic Association. The members of the subcommittee were Chappell, Johnson, Charles, Wagner, Seal, Berry and Nicholson.  Are you familiar with that paper?
14 15 16 17 18 19 20 21	MS. O'DELL: Object to the form.  A. Well, I don't think they state that in so many words, but if you read the paper and you understand that what pelvic inflammatory disease is and its relationship to inflammatory processes in general, yes, that's what they're saying.	15 16 17 18 19 20 21	A. Can tell me who the author of that was?  Q. Sure. The author is this is from the Research Committee of the British Thoracic Association. The members of the subcommittee were Chappell, Johnson, Charles, Wagner, Seal, Berry and Nicholson.  Are you familiar with that

	Page 130		Page 132
1	Q. We'll take a look at it. We'll	1	form.
2	mark it as Deposition Exhibit 16.	2	A. I think that was the hypothesis
3	(Carson Deposition Exhibit 16	3	of those research reports.
4	marked.)	4	BY MR. ZELLERS:
5	A. Thank you.	5	Q. And, in fact, the NSAID studies
6	MS. O'DELL: Thank you.	6	do not find a consistent causal reduction in
7	BY MR. ZELLERS:	7	the risk of ovarian cancer; is that right?
8	Q. This was a study that looked at	8	A. I think that's correct.
9	the association between pleurodesis and lung	9	Q. In your report you also state
10	cancer; is that right?	10	that studies show that use of cornstarch
11	A. Yes.	11	instead of talcum powder reduces the risk of
12	Q. It's a study that you cite on	12	ovarian cancer; is that right?
13	page 1 of your literature list; is that	13	A. Yes.
14	right?	14	Q. If inflammation causes cancer,
15	A. Okay. Yes.	15	why would cornstarch be a superior
16	Q. So you've read it; is that	16	alternative to talc?
17	right?	17	A. The reason is that cornstarch,
18	A. I have.	18	being a biological product, is much it
19	Q. You've considered it; is that	19	does have a rapid clearance from the body,
20	right?	20	even when sequestered, in comparison with a
21	A. Yes.	21	mineral substance like talc.
22	Q. They looked at 210 patients	22	Q. Well, in fact, cornstarch
23	that underwent a pleurodesis with talc or	23	causes or increases the risk of inflammation,
24	kaolin 14 to 40 years before; is that right?	24	granulomas, fibrosis and adhesions, correct?
	Page 131		Page 133
1	A. That's correct.	1	A. It may, yes.
2	Q. And they found that there was	2	Q. Just like you claim talcum
3	no increased incidence of lung cancer and no	3	powder increases the risk of inflammation,
4	cases of mesothelioma; is that right?	4	granulomas, fibrosis and adhesions; is that
5	A. That's correct.	5	right?
6	Q. Why don't well, strike that.	6	MS. O'DELL: Object to the
7	You're aware of the studies	7	form.
8	that have looked at antiinflammatory drugs	8	A. I think you are you're
9	and aspirin use with respect to whether or	9	parsing terms here. That list of things were
10	not they're associated with let me	10	your words. I was agreeing with the
11	withdraw that.	11	relationship between talc and inflammation in
12	Are you familiar with the NSAID	12	ovarian epithelial tissue and the production
13	and aspirin use studies relating to the	13	or granulomas. I did not discuss the
14	incidence of ovarian cancer in chronic users?	14	relationship between talc and adhesions or
15	A. I'm familiar with some of	15	fibrosis. There was one other thing on your
16	those, yes.	16	list.
17	Q. If your theory is correct that	17	BY MR. ZELLERS:
18	inflammation causes ovarian cancer, then you	18	Q. Well, in fact, the FDA has
19	would expect that the studies of NSAIDs and	19	banned the use of cornstarch as a powder for
20	aspirin use, antiinflammatory drugs that	20	lubricating surgical gloves; is that right?
0.1	reduce inflammation, would consistently	21	A. It has, but that's not the
21		1 00	
22	reduce the incidence of ovarian cancer,	22	reason.
	reduce the incidence of ovarian cancer, correct?	23	eason.  Q. Well, the reason that they
22			

	Page 134		Page 136
1	presented an unreasonable and substantial	1	Q. Why do you have to have a
2	risk of illness or injury and that that risk	2	special definition of "oxidative stress"?
3	cannot be corrected or eliminated by	3	I'm asking simply: Is there a publication or
4	labeling, correct?	4	a study which documents that oxidative stress
5	A. I don't know the specific	5	is involved in the development of ovarian
6	language. It looks like you're reading from	6	cancer?
7	a Federal Register document.	7	MS. O'DELL: Object to the
8	The main reason that cornstarch	8	form.
9	has been banned as a lubricant in gloves is	9	A. Sure.
10	because of the potential for transmission of	10	BY MR. ZELLERS:
11	primarily respiratory problems through	11	Q. And what paper are you going to
12	inhalation, mostly by co-workers, not by	12	point me to?
13	patients.	13	A. Well, I'll point you to the
14	Q. You do agree that cornstarch	14	Ness paper to begin with, because it was one
15	has been banned by the FDA for use in	15	of the earlier papers that related oxidative
16	surgical gloves; is that right?	16	stress from talc to the occurrence of ovarian
17	A. All powdered gloves have been	17	cancer. But the relationship between
18	essentially banned from hospitals and	18	inflammation, which essentially is the source
19	operating rooms now.	19	of the oxidative stress, and cancer goes all
20	Q. You also talk about	20	the way back into the 19th Century in terms
21	inflammation and oxidative stress; is that	21	of its proposal as a rationale.
22	right?	22	Q. Is oxidative stress a variation
23	A. Yes.	23	of inflammation as you're using that term
24	Q. Does the presence of oxidative	24	relating to a potential cause of ovarian
24	Q. Does the presence of oxidative	24	relating to a potential cause of ovarian
	Page 135		Page 137
1		1	Page 137 cancer?
1 2	stress in a tissue indicate that cancer will	l	cancer?
		2	cancer?  A. It's a component of
2	stress in a tissue indicate that cancer will develop in that tissue?  A. No.	2 3	cancer?  A. It's a component of inflammation.
2	stress in a tissue indicate that cancer will develop in that tissue?  A. No.  Q. If exposure to a substance	2 3 4	cancer?  A. It's a component of inflammation.  Q. As a toxicologist, how would
2 3 4	stress in a tissue indicate that cancer will develop in that tissue?  A. No.  Q. If exposure to a substance causes oxidative stress in certain tissue,	2 3	cancer?  A. It's a component of inflammation.  Q. As a toxicologist, how would you define fibrous talc?
2 3 4 5	stress in a tissue indicate that cancer will develop in that tissue?  A. No.  Q. If exposure to a substance	2 3 4 5	cancer?  A. It's a component of inflammation.  Q. As a toxicologist, how would you define fibrous talc?  A. Fibrous talc is a form of talc
2 3 4 5 6	stress in a tissue indicate that cancer will develop in that tissue?  A. No.  Q. If exposure to a substance causes oxidative stress in certain tissue, does that mean exposure of all other tissues	2 3 4 5 6	cancer?  A. It's a component of inflammation.  Q. As a toxicologist, how would you define fibrous talc?  A. Fibrous talc is a form of talc that is conformed into elongated structures
2 3 4 5 6 7	stress in a tissue indicate that cancer will develop in that tissue?  A. No.  Q. If exposure to a substance causes oxidative stress in certain tissue, does that mean exposure of all other tissues to that substance will cause oxidative stress in those tissues?	2 3 4 5 6 7 8	cancer?  A. It's a component of inflammation.  Q. As a toxicologist, how would you define fibrous talc?  A. Fibrous talc is a form of talc that is conformed into elongated structures that have an aspect ratio of length greater
2 3 4 5 6 7 8	stress in a tissue indicate that cancer will develop in that tissue?  A. No.  Q. If exposure to a substance causes oxidative stress in certain tissue, does that mean exposure of all other tissues to that substance will cause oxidative stress in those tissues?  A. Not necessarily.	2 3 4 5 6 7 8	cancer?  A. It's a component of inflammation.  Q. As a toxicologist, how would you define fibrous talc?  A. Fibrous talc is a form of talc that is conformed into elongated structures that have an aspect ratio of length greater than width that is different from the
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2 3 4 5 6 7 8 9 10	stress in a tissue indicate that cancer will develop in that tissue?  A. No.  Q. If exposure to a substance causes oxidative stress in certain tissue, does that mean exposure of all other tissues to that substance will cause oxidative stress in those tissues?  A. Not necessarily.  Q. Does the body have protective mechanisms that can limit tissue damage from	2 3 4 5 6 7 8 9 10	cancer?  A. It's a component of inflammation.  Q. As a toxicologist, how would you define fibrous talc?  A. Fibrous talc is a form of talc that is conformed into elongated structures that have an aspect ratio of length greater than width that is different from the majority of talc which is the platy form.  Q. Do you consider yourself to be an expert on fibrous talc?
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	stress in a tissue indicate that cancer will develop in that tissue?  A. No.  Q. If exposure to a substance causes oxidative stress in certain tissue, does that mean exposure of all other tissues to that substance will cause oxidative stress in those tissues?  A. Not necessarily.  Q. Does the body have protective mechanisms that can limit tissue damage from oxidative stress?  A. Yes.  Q. Do all substances that cause oxidative stress also cause cancer?  A. I'm not sure the answer to that question is known.  Q. Are there any studies or publications that indicate that oxidative stress is involved in the development of ovarian cancer?  A. If I can define the term	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. It's a component of inflammation.  Q. As a toxicologist, how would you define fibrous talc?  A. Fibrous talc is a form of talc that is conformed into elongated structures that have an aspect ratio of length greater than width that is different from the majority of talc which is the platy form.  Q. Do you consider yourself to be an expert on fibrous talc?  A. No, I don't.  Q. Do you consider yourself to be an expert on oxidative stress?  A. I have dealt a lot with issues of oxidative stress and health effects resulting from it.  Q. Do you consider yourself to be an expert in oxidative stress?  MS. O'DELL: Objection, asked and answered.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	stress in a tissue indicate that cancer will develop in that tissue?  A. No.  Q. If exposure to a substance causes oxidative stress in certain tissue, does that mean exposure of all other tissues to that substance will cause oxidative stress in those tissues?  A. Not necessarily.  Q. Does the body have protective mechanisms that can limit tissue damage from oxidative stress?  A. Yes.  Q. Do all substances that cause oxidative stress also cause cancer?  A. I'm not sure the answer to that question is known.  Q. Are there any studies or publications that indicate that oxidative stress is involved in the development of ovarian cancer?	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. It's a component of inflammation.  Q. As a toxicologist, how would you define fibrous talc?  A. Fibrous talc is a form of talc that is conformed into elongated structures that have an aspect ratio of length greater than width that is different from the majority of talc which is the platy form.  Q. Do you consider yourself to be an expert on fibrous talc?  A. No, I don't.  Q. Do you consider yourself to be an expert on oxidative stress?  A. I have dealt a lot with issues of oxidative stress and health effects resulting from it.  Q. Do you consider yourself to be an expert in oxidative stress?  MS. O'DELL: Objection, asked and answered.

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1	regarding my professional understanding and	1	reports, the epidemiology first, is looking
2	training.	2	at the relationship between perineal use of
3	BY MR. ZELLERS:	3	dusting powders, talcum powders and ovarian
4	Q. You've never been involved in	4	cancer.
5	terms of any research or publication on the	5	Although there have been
6	subject of oxidative stress and any	6	efforts in some of those studies to
7	association with ovarian cancer, correct?	7	characterize the proportion or the
8	A. Not in terms of ovarian cancer,	8	ingredients that would be either asbestos or
9	no.	9	fibers, that's not done in all cases, and
10	Q. You have not been involved in	10	it's not ruled out in any cases.
11	any research or publication relating to the	11	The also, the research
12	subject of inflammation and its association	12	studies that have been performed, the
13	with ovarian cancer, correct?	13	testing, for example, of the products
14	A. No. All right. Yes, correct.	14	themselves are replete with reports of
15	Q. Yes, it is correct? Okay.	15	components of these powders that are fibrous
16	You claim that the presence of	16	in nature.
17	asbestos and fibrous talc further intensifies	17	MR. ZELLERS: Move to strike as
18	the carcinogenic effect of tale; is that	18	nonresponsive.
19	right?	19	BY MR. ZELLERS:
20	A. Yes.	20	Q. Do you believe that all talcum
21	O. Is that statement different	21	powder products that are on the market
22		22	contain asbestos?
23	from the statement directly above where you allege that asbestos and mineral fibers	23	MS. O'DELL: Object to the
24	•	24	form.
24	intensify the inflammatory response and	24	101111.
	Page 139		Page 141
1	stimulate the cell growth and proliferation?	1	A. I don't know.
2	stimulate the cell growth and proliferation?  A. It's not different, no.	2	A. I don't know. BY MR. ZELLERS:
	stimulate the cell growth and proliferation?  A. It's not different, no.  Q. Are your opinions dependent on		A. I don't know. BY MR. ZELLERS: Q. Does it matter to your opinion
2	stimulate the cell growth and proliferation?  A. It's not different, no.  Q. Are your opinions dependent on talc containing carcinogenic asbestos and/or	2 3 4	A. I don't know. BY MR. ZELLERS: Q. Does it matter to your opinion as to whether or not the talcum powder
2	stimulate the cell growth and proliferation?  A. It's not different, no.  Q. Are your opinions dependent on	2 3	A. I don't know. BY MR. ZELLERS: Q. Does it matter to your opinion as to whether or not the talcum powder products, and particularly the talcum powder
2 3 4	stimulate the cell growth and proliferation?  A. It's not different, no.  Q. Are your opinions dependent on talc containing carcinogenic asbestos and/or fibrous talc?  A. No.	2 3 4	A. I don't know. BY MR. ZELLERS: Q. Does it matter to your opinion as to whether or not the talcum powder products, and particularly the talcum powder products involved in this case, contain
2 3 4 5	stimulate the cell growth and proliferation?  A. It's not different, no.  Q. Are your opinions dependent on talc containing carcinogenic asbestos and/or fibrous talc?  A. No.  Q. Do you believe that talcum	2 3 4 5 6 7	A. I don't know. BY MR. ZELLERS: Q. Does it matter to your opinion as to whether or not the talcum powder products, and particularly the talcum powder products involved in this case, contain asbestos?
2 3 4 5 6	stimulate the cell growth and proliferation?  A. It's not different, no. Q. Are your opinions dependent on talc containing carcinogenic asbestos and/or fibrous talc?  A. No. Q. Do you believe that talcum powder without asbestos causes ovarian	2 3 4 5 6	A. I don't know. BY MR. ZELLERS: Q. Does it matter to your opinion as to whether or not the talcum powder products, and particularly the talcum powder products involved in this case, contain
2 3 4 5 6 7	stimulate the cell growth and proliferation?  A. It's not different, no.  Q. Are your opinions dependent on talc containing carcinogenic asbestos and/or fibrous talc?  A. No.  Q. Do you believe that talcum	2 3 4 5 6 7	A. I don't know. BY MR. ZELLERS: Q. Does it matter to your opinion as to whether or not the talcum powder products, and particularly the talcum powder products involved in this case, contain asbestos? A. I wouldn't have a way to be able to answer that yes or no.
2 3 4 5 6 7 8	stimulate the cell growth and proliferation?  A. It's not different, no. Q. Are your opinions dependent on talc containing carcinogenic asbestos and/or fibrous talc?  A. No. Q. Do you believe that talcum powder without asbestos causes ovarian	2 3 4 5 6 7 8	A. I don't know. BY MR. ZELLERS: Q. Does it matter to your opinion as to whether or not the talcum powder products, and particularly the talcum powder products involved in this case, contain asbestos? A. I wouldn't have a way to be able to answer that yes or no. Q. Do you strike that.
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. It's not different, no. Q. Are your opinions dependent on talc containing carcinogenic asbestos and/or fibrous talc? A. No. Q. Do you believe that talcum powder without asbestos causes ovarian cancer? A. I believe talcum powder causes ovarian cancer. I have not seen any research done on talcum powder that has been shown not to contain asbestos. Q. Your assumption that you have made in formulating your opinions here is that talcum powder contains asbestos; is that right? A. No. Q. What assumption have you made as to whether or not talcum powder contains	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. I don't know. BY MR. ZELLERS: Q. Does it matter to your opinion as to whether or not the talcum powder products, and particularly the talcum powder products involved in this case, contain asbestos? A. I wouldn't have a way to be able to answer that yes or no. Q. Do you strike that. Have you reached a conclusion as to whether or not the talcum powder products involved in this case contain fibrous talc? A. I think that most of them do. Q. Does all of the talcum powder contain fibrous talc or just some of it? A. Certainly a lot of it does. Q. The basis for your conclusion that the talcum powder at issue in this case

	Page 142		Page 144
1		1	MS. O'DELL: Object to the
2	A. Yes. Also Longo's publications	2	form.
3	and reports. BY MR. ZELLERS:	3	A. That wasn't my charge. I defer
4	Q. You have reviewed the Longo	4	to the other experts in this case.
5	reports; is that right?	5	BY MR. ZELLERS:
6	A. Yes.	6	Q. Do you have an opinion on what
7	Q. Have you ever met with him?	7	type of asbestos you believe is in the talcum
8	A. No.	8	powder products at issue in this case?
9	Q. Do you know his qualifications?	9	A. Well, there have been various
10	A. I looked at his qualifications	10	types shown, but I think for the most part
11	at one point, but I don't recall exactly what	11	it's tremolite and anthophyllite.
12	it is at this stage.	12	Q. Are you familiar with
13	Q. Ever hear of him before this	13	crocidolite?
14	lawsuit, your getting involved in the talc	14	A. Yes.
15	litigation back in October of 2018?	15	Q. Is crocidolite found in talcum
16	A. No.	16	powder or baby powder?
17		17	A. It's not commonly found in it.
18	Q. Have you reviewed any of	18	Q. You believe that the
19	Longo's testing where he did not find asbestos?	19	
20		20	asbestos types of asbestos that may be in the talcum powder at issue in this case is
21	A. I the only thing I've	21	
22	reviewed are what's present in those reports that I cited.	22	tremolite and acidolite [sic]?
		23	MS. O'DELL: Objection.
23	Q. Were you provided by counsel	23	A. Anthophyllite. There are
24	for plaintiffs with any testing reports from	24	others found, but you asked for most common.
	Page 143		Page 145
1	Longo where he did not find asbestos?		
_		1	BY MR. ZELLERS:
2	A. There are some of those listed	1 2	Q. Most common you believe are
2 3	-		
	A. There are some of those listed	2	Q. Most common you believe are
3	A. There are some of those listed in his reports.	2	Q. Most common you believe are tremolite and anthophyllite?
3 4	A. There are some of those listed in his reports.  Q. Have you reviewed the FDA's	2 3 4	<ul><li>Q. Most common you believe are tremolite and anthophyllite?</li><li>A. Anthophyllite.</li></ul>
3 4 5	A. There are some of those listed in his reports.  Q. Have you reviewed the FDA's testing of talcum powder products?	2 3 4 5	<ul><li>Q. Most common you believe are tremolite and anthophyllite?</li><li>A. Anthophyllite.</li><li>Q. Anthophyllite. Those two; is</li></ul>
3 4 5 6	A. There are some of those listed in his reports.  Q. Have you reviewed the FDA's testing of talcum powder products?  A. The FDA didn't really do much	2 3 4 5 6	<ul><li>Q. Most common you believe are tremolite and anthophyllite?</li><li>A. Anthophyllite.</li><li>Q. Anthophyllite. Those two; is that right?</li></ul>
3 4 5 6 7	A. There are some of those listed in his reports.  Q. Have you reviewed the FDA's testing of talcum powder products?  A. The FDA didn't really do much testing of talcum powder products.	2 3 4 5 6 7	<ul> <li>Q. Most common you believe are tremolite and anthophyllite?</li> <li>A. Anthophyllite.</li> <li>Q. Anthophyllite. Those two; is that right?</li> <li>A. Yes.</li> </ul>
3 4 5 6 7 8	A. There are some of those listed in his reports.  Q. Have you reviewed the FDA's testing of talcum powder products?  A. The FDA didn't really do much testing of talcum powder products.  Q. Have you reviewed the FDA's	2 3 4 5 6 7 8	Q. Most common you believe are tremolite and anthophyllite? A. Anthophyllite. Q. Anthophyllite. Those two; is that right? A. Yes. Q. What types of asbestos are associated with ovarian cancer?
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3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. There are some of those listed in his reports.  Q. Have you reviewed the FDA's testing of talcum powder products?  A. The FDA didn't really do much testing of talcum powder products.  Q. Have you reviewed the FDA's testing of talcum powder products?  MS. O'DELL: Objection, vague.  A. The only FDA testing that I looked at was the I have it referenced in my list, but the FDA, based on a recommendation, requested samples from various companies, I think nine different sources of talc. They received four and tested those. And based on their test method determined that there was not a not evidence of a significant hazard.  BY MR. ZELLERS:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Q. Most common you believe are tremolite and anthophyllite? A. Anthophyllite. Q. Anthophyllite. Those two; is that right? A. Yes. Q. What types of asbestos are associated with ovarian cancer? A. Well, I'll go back to my list again. Crocidolite is associated with ovarian cancer in the Acheson report from 1982, which was from female gas mask manufacturers in England who made gas masks during the period of the Second World War, and crocidolite is associated with that with a fairly high relative risk of 2.96. Chrysotile asbestos had also a positive relative risk of 1.74. There was a study of factory

	Page 146		Page 148
1	cement products and plasters, so the	1	But based on my current
2	Q. What type of asbestos, if you	2	understanding, I don't believe they've ever
3	know?	3	been totally successful in doing so.
4	A. That would have been primarily	4	So in answer to your question,
5	amphibole asbestos types, which would include	5	which I think was, was there ever a point in
6	crocidolite and tremolite and anthophyllite,	6	time where you believe the talcum powder
7	amosite is in that category.	7	products involved in this case were not
8	Bertolotti in 2008 published a	8	contaminated with asbestos, no.
9	report actually, there were several	9	BY MR. ZELLERS:
10	reports that resulted from the Eternit	10	Q. You cite in your report,
11	factory studies in Casale Monferrato in	11	page 5, to two exhibits to the depositions of
12	Italy, which was a plant that manufactured	12	John Hopkins and Julie Pier in support of
13	cement sheet and corrugated tubing, and there	13	your opinion that talcum powder products
14	were a number of studies that showed elevated	14	contain asbestos; is that right?
15	relative risks in persons exposed to asbestos	15	A. That's correct.
16	in that work, and that would also have been	16	Q. Looking at page 5, footnote 1,
17	amphibole asbestos types.	17	you cite to Exhibit Hopkins-28 in the Hopkins
18	Q. The studies that you've recited	18	deposition and Exhibit Pier-47 in the Pier
19	for us, those are all occupational studies;	19	deposition; is that right?
20	is that right?	20	A. That's correct.
21	A. Yes. I've got a lot more.	21	Q. Are you aware that those
22	Q. Well, and it's on your list,	22	exhibits were created by plaintiffs' counsel?
23	which we marked as Exhibit 15; is that right?	23	MS. O'DELL: Objection to form.
24	A. That's correct.	24	A. I didn't I I don't know
	The That's correct.		The Fulding F Fulding Miles
	Page 147		Page 149
1	Q. All right. Those studies did	1	that and doesn't matter to me.
2	not involve the perineal application of	2	BY MR. ZELLERS:
3	talcum powder products; is that right?	3	Q. Do you know where the data in
4	MS. O'DELL: Object to the	l	
		4	those exhibits come from?
5	form.	4 5	those exhibits come from?  A. Well, they come from the two
5 6	·		
	form.	5	A. Well, they come from the two
6	form. A. It was not a factor in the	5 6	A. Well, they come from the two persons who are testifying who have produced
6 7	form.  A. It was not a factor in the study.	5 6 7	A. Well, they come from the two persons who are testifying who have produced them from their mostly from their business
6 7 8	form. A. It was not a factor in the study. BY MR. ZELLERS:	5 6 7 8	A. Well, they come from the two persons who are testifying who have produced them from their mostly from their business records.
6 7 8 9	form. A. It was not a factor in the study. BY MR. ZELLERS: Q. Crocidolite and chrysotile	5 6 7 8 9	A. Well, they come from the two persons who are testifying who have produced them from their mostly from their business records.  Q. Okay. So you believe that
6 7 8 9 10	form. A. It was not a factor in the study. BY MR. ZELLERS: Q. Crocidolite and chrysotile asbestos has generally not been found in	5 6 7 8 9	A. Well, they come from the two persons who are testifying who have produced them from their mostly from their business records.  Q. Okay. So you believe that Exhibit Hopkins-28 to the Hopkins deposition
6 7 8 9 10 11	form. A. It was not a factor in the study. BY MR. ZELLERS: Q. Crocidolite and chrysotile asbestos has generally not been found in talcum powder products, correct?	5 6 7 8 9 10	A. Well, they come from the two persons who are testifying who have produced them from their mostly from their business records.  Q. Okay. So you believe that Exhibit Hopkins-28 to the Hopkins deposition and Exhibit Pier-47 to the Pier deposition
6 7 8 9 10 11	form. A. It was not a factor in the study. BY MR. ZELLERS: Q. Crocidolite and chrysotile asbestos has generally not been found in talcum powder products, correct? A. In general, that's the case.	5 6 7 8 9 10 11 12	A. Well, they come from the two persons who are testifying who have produced them from their mostly from their business records.  Q. Okay. So you believe that Exhibit Hopkins-28 to the Hopkins deposition and Exhibit Pier-47 to the Pier deposition come from the business records of the
6 7 8 9 10 11 12 13	form. A. It was not a factor in the study. BY MR. ZELLERS: Q. Crocidolite and chrysotile asbestos has generally not been found in talcum powder products, correct? A. In general, that's the case. Q. Was there ever a point in time	5 6 7 8 9 10 11 12 13	A. Well, they come from the two persons who are testifying who have produced them from their mostly from their business records.  Q. Okay. So you believe that Exhibit Hopkins-28 to the Hopkins deposition and Exhibit Pier-47 to the Pier deposition come from the business records of the Johnson & Johnson Company and Imerys?
6 7 8 9 10 11 12 13	form. A. It was not a factor in the study. BY MR. ZELLERS: Q. Crocidolite and chrysotile asbestos has generally not been found in talcum powder products, correct? A. In general, that's the case. Q. Was there ever a point in time where you believe that the talcum powder	5 6 7 8 9 10 11 12 13	A. Well, they come from the two persons who are testifying who have produced them from their mostly from their business records.  Q. Okay. So you believe that Exhibit Hopkins-28 to the Hopkins deposition and Exhibit Pier-47 to the Pier deposition come from the business records of the Johnson & Johnson Company and Imerys?  A. From the most part, there was
6 7 8 9 10 11 12 13 14	form. A. It was not a factor in the study. BY MR. ZELLERS: Q. Crocidolite and chrysotile asbestos has generally not been found in talcum powder products, correct? A. In general, that's the case. Q. Was there ever a point in time where you believe that the talcum powder products involved in this case were not contaminated with asbestos?	5 6 7 8 9 10 11 12 13 14	A. Well, they come from the two persons who are testifying who have produced them from their mostly from their business records.  Q. Okay. So you believe that Exhibit Hopkins-28 to the Hopkins deposition and Exhibit Pier-47 to the Pier deposition come from the business records of the Johnson & Johnson Company and Imerys?  A. From the most part, there was a there was a table that was constructed
6 7 8 9 10 11 12 13 14 15	form. A. It was not a factor in the study. BY MR. ZELLERS: Q. Crocidolite and chrysotile asbestos has generally not been found in talcum powder products, correct? A. In general, that's the case. Q. Was there ever a point in time where you believe that the talcum powder products involved in this case were not	5 6 7 8 9 10 11 12 13 14 15	A. Well, they come from the two persons who are testifying who have produced them from their mostly from their business records.  Q. Okay. So you believe that Exhibit Hopkins-28 to the Hopkins deposition and Exhibit Pier-47 to the Pier deposition come from the business records of the Johnson & Johnson Company and Imerys?  A. From the most part, there was a there was a table that was constructed during the deposition which was sort of a
6 7 8 9 10 11 12 13 14 15 16	form. A. It was not a factor in the study. BY MR. ZELLERS: Q. Crocidolite and chrysotile asbestos has generally not been found in talcum powder products, correct? A. In general, that's the case. Q. Was there ever a point in time where you believe that the talcum powder products involved in this case were not contaminated with asbestos? MS. O'DELL: Objection to form,	5 6 7 8 9 10 11 12 13 14 15 16	A. Well, they come from the two persons who are testifying who have produced them from their mostly from their business records.  Q. Okay. So you believe that Exhibit Hopkins-28 to the Hopkins deposition and Exhibit Pier-47 to the Pier deposition come from the business records of the Johnson & Johnson Company and Imerys?  A. From the most part, there was a there was a table that was constructed during the deposition which was sort of a piece of summary information. I don't know
6 7 8 9 10 11 12 13 14 15 16 17	form. A. It was not a factor in the study. BY MR. ZELLERS: Q. Crocidolite and chrysotile asbestos has generally not been found in talcum powder products, correct? A. In general, that's the case. Q. Was there ever a point in time where you believe that the talcum powder products involved in this case were not contaminated with asbestos? MS. O'DELL: Objection to form, vague as to time.	5 6 7 8 9 10 11 12 13 14 15 16 17	A. Well, they come from the two persons who are testifying who have produced them from their mostly from their business records.  Q. Okay. So you believe that Exhibit Hopkins-28 to the Hopkins deposition and Exhibit Pier-47 to the Pier deposition come from the business records of the Johnson & Johnson Company and Imerys?  A. From the most part, there was a there was a table that was constructed during the deposition which was sort of a piece of summary information. I don't know if it's an exhibit to the deposition or if
6 7 8 9 10 11 12 13 14 15 16 17 18	form. A. It was not a factor in the study. BY MR. ZELLERS: Q. Crocidolite and chrysotile asbestos has generally not been found in talcum powder products, correct? A. In general, that's the case. Q. Was there ever a point in time where you believe that the talcum powder products involved in this case were not contaminated with asbestos?  MS. O'DELL: Objection to form, vague as to time. A. My understanding is that Imerys	5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. Well, they come from the two persons who are testifying who have produced them from their mostly from their business records.  Q. Okay. So you believe that Exhibit Hopkins-28 to the Hopkins deposition and Exhibit Pier-47 to the Pier deposition come from the business records of the Johnson & Johnson Company and Imerys?  A. From the most part, there was a there was a table that was constructed during the deposition which was sort of a piece of summary information. I don't know if it's an exhibit to the deposition or if it's something separate from that, but it
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	form. A. It was not a factor in the study. BY MR. ZELLERS: Q. Crocidolite and chrysotile asbestos has generally not been found in talcum powder products, correct? A. In general, that's the case. Q. Was there ever a point in time where you believe that the talcum powder products involved in this case were not contaminated with asbestos? MS. O'DELL: Objection to form, vague as to time. A. My understanding is that Imerys and their predecessors and Johnson & Johnson	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	A. Well, they come from the two persons who are testifying who have produced them from their mostly from their business records.  Q. Okay. So you believe that Exhibit Hopkins-28 to the Hopkins deposition and Exhibit Pier-47 to the Pier deposition come from the business records of the Johnson & Johnson Company and Imerys?  A. From the most part, there was a there was a table that was constructed during the deposition which was sort of a piece of summary information. I don't know if it's an exhibit to the deposition or if it's something separate from that, but it would not have been from business records,
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	form. A. It was not a factor in the study. BY MR. ZELLERS: Q. Crocidolite and chrysotile asbestos has generally not been found in talcum powder products, correct? A. In general, that's the case. Q. Was there ever a point in time where you believe that the talcum powder products involved in this case were not contaminated with asbestos? MS. O'DELL: Objection to form, vague as to time. A. My understanding is that Imerys and their predecessors and Johnson & Johnson made significant efforts to reduce components	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. Well, they come from the two persons who are testifying who have produced them from their mostly from their business records.  Q. Okay. So you believe that Exhibit Hopkins-28 to the Hopkins deposition and Exhibit Pier-47 to the Pier deposition come from the business records of the Johnson & Johnson Company and Imerys?  A. From the most part, there was a there was a table that was constructed during the deposition which was sort of a piece of summary information. I don't know if it's an exhibit to the deposition or if it's something separate from that, but it would not have been from business records, but occurred at the deposition itself.
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	form. A. It was not a factor in the study. BY MR. ZELLERS: Q. Crocidolite and chrysotile asbestos has generally not been found in talcum powder products, correct? A. In general, that's the case. Q. Was there ever a point in time where you believe that the talcum powder products involved in this case were not contaminated with asbestos? MS. O'DELL: Objection to form, vague as to time. A. My understanding is that Imerys and their predecessors and Johnson & Johnson made significant efforts to reduce components of asbestos in their talc products over a	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. Well, they come from the two persons who are testifying who have produced them from their mostly from their business records.  Q. Okay. So you believe that Exhibit Hopkins-28 to the Hopkins deposition and Exhibit Pier-47 to the Pier deposition come from the business records of the Johnson & Johnson Company and Imerys?  A. From the most part, there was a there was a table that was constructed during the deposition which was sort of a piece of summary information. I don't know if it's an exhibit to the deposition or if it's something separate from that, but it would not have been from business records, but occurred at the deposition itself.  MS. O'DELL: Excuse me,

	Page 150		Page 152
1	Exhibit Hopkins-28 and Pier	1	exhibits you're looking at,
		2	•
2	Exhibit Pier-47 in answering these		Exhibit Hopkins-28 and Exhibit Pier-47, were
3	questions?	3	included in talcum powder product sold by J&J
4	THE WITNESS: If that's easy to	4	Consumer Products?
5	do, yes.	5	MS. O'DELL: Objection to the
6	MS. O'DELL: It's very easy to	6	form, asked and answered.
7	do. This is a copy of	7	A. No, I don't.
8	Exhibit Hopkins-28 of the Hopkins	8	BY MR. ZELLERS:
9	deposition and Exhibit Pier-47 of the	9	Q. Have you confirmed strike
10	Pier deposition.	10	that.
11	THE WITNESS: Okay.	11	What amount of asbestos
12	BY MR. ZELLERS:	12	exposure is associated with ovarian cancer?
13	Q. Dr. Carson?	13	A. Any.
14	A. Yes, sir.	14	Q. Your testimony under oath is
15	Q. Did you make any effort to	15	that any asbestos exposure is associated with
16	investigate the alternative explanations for	16	ovarian cancer?
17	the data that's contained in those two	17	A. Any asbestos exposure and any
18	exhibits, Exhibit Hopkins-28 and	18	perineal application of talcum powder is
19	Exhibit Pier-47?	19	associated with an increased risk for ovarian
20	A. Alternative explanations, I'm	20	cancer.
21	not sure what you mean by that.	21	Q. The amount of asbestos
22	Q. If the Johnson & Johnson	22	contained or allegedly contained within
23	company companies' scientists and Imerys'	23	the baby powder is of no consequence,
24	scientists opined that those tests don't	24	correct?
	Page 151		Page 153
1	actually show asbestos, you have no expertise	1	MS. O'DELL: Object to the
2	to dispute that, do you?	2	form.
3	MS. O'DELL: Object to the	3	A. No, it is of consequence, and a
4	form.	4	larger dose would be a greater hazard. But
5	A. No, I don't have any personal	5	that doesn't mean that a low dose is not a
6	expertise to dispute that.	6	hazard.
7	BY MR. ZELLERS:	7	BY MR. ZELLERS:
8			
0	Q. Do you know whether or not any	8	Q. My question is: Do you know
9	Q. Do you know whether or not any of the talc product that is identified on	8 9	Q. My question is: Do you know the amount of alleged asbestos exposure
		l	
9	of the talc product that is identified on	9	the amount of alleged asbestos exposure
9 10	of the talc product that is identified on Exhibit Hopkins-28 and Exhibit Pier-47 was	9 10	the amount of alleged asbestos exposure that's associated with ovarian cancer?
9 10 11	of the talc product that is identified on Exhibit Hopkins-28 and Exhibit Pier-47 was actually used in the talcum powder products	9 10 11	the amount of alleged asbestos exposure that's associated with ovarian cancer?  A. No.
9 10 11 12	of the talc product that is identified on Exhibit Hopkins-28 and Exhibit Pier-47 was actually used in the talcum powder products that were sold by the Johnson & Johnson	9 10 11 12	the amount of alleged asbestos exposure that's associated with ovarian cancer?  A. No.  Q. Do you know the type of ovarian
9 10 11 12 13	of the talc product that is identified on Exhibit Hopkins-28 and Exhibit Pier-47 was actually used in the talcum powder products that were sold by the Johnson & Johnson Consumer Products company?	9 10 11 12 13	the amount of alleged asbestos exposure that's associated with ovarian cancer?  A. No.  Q. Do you know the type of ovarian cancer that asbestos is associated with?
9 10 11 12 13 14	of the talc product that is identified on Exhibit Hopkins-28 and Exhibit Pier-47 was actually used in the talcum powder products that were sold by the Johnson & Johnson Consumer Products company?  MS. O'DELL: Objection to form.	9 10 11 12 13 14	the amount of alleged asbestos exposure that's associated with ovarian cancer?  A. No. Q. Do you know the type of ovarian cancer that asbestos is associated with?  MS. O'DELL: Object to the
9 10 11 12 13 14	of the talc product that is identified on Exhibit Hopkins-28 and Exhibit Pier-47 was actually used in the talcum powder products that were sold by the Johnson & Johnson Consumer Products company?  MS. O'DELL: Objection to form. A. I it's my understanding that	9 10 11 12 13 14 15	the amount of alleged asbestos exposure that's associated with ovarian cancer?  A. No. Q. Do you know the type of ovarian cancer that asbestos is associated with?  MS. O'DELL: Object to the form.
9 10 11 12 13 14 15	of the talc product that is identified on Exhibit Hopkins-28 and Exhibit Pier-47 was actually used in the talcum powder products that were sold by the Johnson & Johnson Consumer Products company?  MS. O'DELL: Objection to form.  A. I it's my understanding that some of these results, at least in	9 10 11 12 13 14 15	the amount of alleged asbestos exposure that's associated with ovarian cancer?  A. No. Q. Do you know the type of ovarian cancer that asbestos is associated with?  MS. O'DELL: Object to the form.  A. It's associated mostly with the
9 10 11 12 13 14 15 16 17	of the talc product that is identified on Exhibit Hopkins-28 and Exhibit Pier-47 was actually used in the talcum powder products that were sold by the Johnson & Johnson Consumer Products company?  MS. O'DELL: Objection to form.  A. I it's my understanding that some of these results, at least in particular from the Pier deposition, that	9 10 11 12 13 14 15 16 17	the amount of alleged asbestos exposure that's associated with ovarian cancer?  A. No. Q. Do you know the type of ovarian cancer that asbestos is associated with?  MS. O'DELL: Object to the form.  A. It's associated mostly with the collection of epithelial ovarian cancers
9 10 11 12 13 14 15 16 17	of the talc product that is identified on Exhibit Hopkins-28 and Exhibit Pier-47 was actually used in the talcum powder products that were sold by the Johnson & Johnson Consumer Products company?  MS. O'DELL: Objection to form.  A. I it's my understanding that some of these results, at least in particular from the Pier deposition, that some of these results were from testing that was done on material that had already been	9 10 11 12 13 14 15 16 17	the amount of alleged asbestos exposure that's associated with ovarian cancer?  A. No. Q. Do you know the type of ovarian cancer that asbestos is associated with?  MS. O'DELL: Object to the form.  A. It's associated mostly with the collection of epithelial ovarian cancersBY MR. ZELLERS: Q. What
9 10 11 12 13 14 15 16 17 18	of the talc product that is identified on Exhibit Hopkins-28 and Exhibit Pier-47 was actually used in the talcum powder products that were sold by the Johnson & Johnson Consumer Products company?  MS. O'DELL: Objection to form.  A. I it's my understanding that some of these results, at least in particular from the Pier deposition, that some of these results were from testing that	9 10 11 12 13 14 15 16 17 18	the amount of alleged asbestos exposure that's associated with ovarian cancer?  A. No. Q. Do you know the type of ovarian cancer that asbestos is associated with?  MS. O'DELL: Object to the form.  A. It's associated mostly with the collection of epithelial ovarian cancersBY MR. ZELLERS: Q. What A primarily serous.
9 10 11 12 13 14 15 16 17 18 19 20	of the talc product that is identified on Exhibit Hopkins-28 and Exhibit Pier-47 was actually used in the talcum powder products that were sold by the Johnson & Johnson Consumer Products company?  MS. O'DELL: Objection to form.  A. I it's my understanding that some of these results, at least in particular from the Pier deposition, that some of these results were from testing that was done on material that had already been shipped and probably incorporated into	9 10 11 12 13 14 15 16 17 18 19 20	the amount of alleged asbestos exposure that's associated with ovarian cancer?  A. No. Q. Do you know the type of ovarian cancer that asbestos is associated with?  MS. O'DELL: Object to the form.  A. It's associated mostly with the collection of epithelial ovarian cancersBY MR. ZELLERS: Q. What A primarily serous. Q. Does the type of ovarian cancer
9 10 11 12 13 14 15 16 17 18 19 20 21	of the talc product that is identified on Exhibit Hopkins-28 and Exhibit Pier-47 was actually used in the talcum powder products that were sold by the Johnson & Johnson Consumer Products company?  MS. O'DELL: Objection to form.  A. I it's my understanding that some of these results, at least in particular from the Pier deposition, that some of these results were from testing that was done on material that had already been shipped and probably incorporated into products.	9 10 11 12 13 14 15 16 17 18 19 20 21	the amount of alleged asbestos exposure that's associated with ovarian cancer?  A. No. Q. Do you know the type of ovarian cancer that asbestos is associated with?  MS. O'DELL: Object to the form.  A. It's associated mostly with the collection of epithelial ovarian cancersBY MR. ZELLERS: Q. What A primarily serous.

	Page 154		Page 156
1	asbestos can produce all types of ovarian	1	A. That's background information
2	cancer; is that correct?	2	and my personal knowledge.
3	MS. O'DELL: Object to the	3	Q. You are not going to give an
4	form.	4	opinion on mines, mining or milling in this
5	A. I suspect that some forms of	5	case; is that right?
6	asbestos are much more carcinogenic than	6	A. Depends on the questions.
7	others, and that would be true for the	7	Q. Well, as you sit here today, do
8	ovaries as well as other structures in the	8	you intend to give opinions on talc mining,
9	body.	9	mines or milling?
10	BY MR. ZELLERS:	10	A. It wasn't my intention, but if
11	Q. Are you able to distinguish for	11	asked a question that I think I'm qualified
12	us what types of asbestos cause or are	12	to answer, I'll try to do it.
13	associated with what types of ovarian cancer?	13	Q. Are you an expert on talc
14	A. I don't think I'm able to make	14	mining and milling?
15	those distinctions, but the studies I just	15	A. I'm an expert on industrial
16	read to you regarding the relationship	16	processes in general, and if I have some
17	between asbestos and ovarian cancer and the	17	personal understanding of talc mining and
18	others on my list do indicate that there are,	18	milling.
19	for example, in the Acheson study, there	19	Q. Have you been personally
20	were there was a positive relationship	20	involved in talc mining and milling?
21	between both crocidolite and chrysotile	21	A. I haven't been involved in it;
22	exposure, and the crocidolite had a greater	22	I've observed it.
23	effect on ovarian cancer than the chrysotile,	23	Q. Do you consider yourself to be
24	but did not have they were both positive.	24	an expert in talc mining and milling?
	Page 155		Page 157
1	Q. What type of ovarian cancer?	1	MS. O'DELL: Objection, asked
2	A. That, I don't know at the	2	and answered.
3	moment. I could look in the paper and see if	3	A. No, I don't.
4	it's listed.	4	BY MR. ZELLERS:
5	Q. There are a number of different	5	Q. You have no independent basis
6	types of ovarian cancer; is that right?	6	to say that cosmetic talc contains asbestos,
7	A. That's correct.	7	correct?
8	Q. You are not familiar with J&J	8	MS. O'DELL: Object to the
9	Consumer Products' procedures for milling or	9	form.
10	mining; is that right?	10	A. What do you mean by independent
11	MS. O'DELL: Object to the	11	basis?
12	form.	12	BY MR. ZELLERS:
13	A. I'm familiar with some of their	13	Q. You have not done any testing
13 14	procedures, yes.	14	of talcum powder to determine whether it
13 14 15	procedures, yes. BY MR. ZELLERS:	14 15	of talcum powder to determine whether it contains asbestos or not; is that right?
13 14 15 16	procedures, yes. BY MR. ZELLERS: Q. Are you familiar with their	14 15 16	of talcum powder to determine whether it contains asbestos or not; is that right?  A. No. All of my understanding is
13 14 15 16 17	procedures, yes. BY MR. ZELLERS: Q. Are you familiar with their testing of source mines?	14 15 16 17	of talcum powder to determine whether it contains asbestos or not; is that right?  A. No. All of my understanding is based on other sources.
13 14 15 16 17	procedures, yes. BY MR. ZELLERS: Q. Are you familiar with their testing of source mines? A. To some extent.	14 15 16 17 18	of talcum powder to determine whether it contains asbestos or not; is that right?  A. No. All of my understanding is based on other sources.  Q. And those other sources would
13 14 15 16 17 18	procedures, yes. BY MR. ZELLERS: Q. Are you familiar with their testing of source mines? A. To some extent. MS. O'DELL: Object to the	14 15 16 17 18 19	of talcum powder to determine whether it contains asbestos or not; is that right?  A. No. All of my understanding is based on other sources.  Q. And those other sources would be, in part, the testing that was done by
13 14 15 16 17 18 19 20	procedures, yes. BY MR. ZELLERS: Q. Are you familiar with their testing of source mines? A. To some extent. MS. O'DELL: Object to the form.	14 15 16 17 18 19 20	of talcum powder to determine whether it contains asbestos or not; is that right?  A. No. All of my understanding is based on other sources.  Q. And those other sources would be, in part, the testing that was done by Longo; is that right?
13 14 15 16 17 18 19 20 21	procedures, yes. BY MR. ZELLERS: Q. Are you familiar with their testing of source mines? A. To some extent. MS. O'DELL: Object to the form. BY MR. ZELLERS:	14 15 16 17 18 19 20 21	of talcum powder to determine whether it contains asbestos or not; is that right?  A. No. All of my understanding is based on other sources.  Q. And those other sources would be, in part, the testing that was done by Longo; is that right?  A. Yes, as well as the testing
13 14 15 16 17 18 19 20 21	procedures, yes. BY MR. ZELLERS: Q. Are you familiar with their testing of source mines? A. To some extent. MS. O'DELL: Object to the form. BY MR. ZELLERS: Q. Is it set forth in your report,	14 15 16 17 18 19 20 21	of talcum powder to determine whether it contains asbestos or not; is that right?  A. No. All of my understanding is based on other sources.  Q. And those other sources would be, in part, the testing that was done by Longo; is that right?  A. Yes, as well as the testing that's reported in the in the literature
13 14 15 16 17 18 19 20 21	procedures, yes. BY MR. ZELLERS: Q. Are you familiar with their testing of source mines? A. To some extent. MS. O'DELL: Object to the form. BY MR. ZELLERS:	14 15 16 17 18 19 20 21	of talcum powder to determine whether it contains asbestos or not; is that right?  A. No. All of my understanding is based on other sources.  Q. And those other sources would be, in part, the testing that was done by Longo; is that right?  A. Yes, as well as the testing

1			
1	Page 158		Page 160
	Q. You're looking now back at the	1	BY MR. ZELLERS:
2	Pier Exhibit Pier-47 and the Hopkins	2	Q. The Reid paper that I've handed
3	Exhibit Hopkins-28; is that right?	3	you, what we've marked as Exhibit 17, looks
4	A. I was actually referring to the	4	at the issue: Does exposure to asbestos
5	Imerys documents that are referenced toward	5	cause ovarian cancer.
6	the end of the literature exhibit to my	6	Is that right?
7	report, but certainly the Exhibit Pier-47	7	A. Yes.
8	would be included there.	8	Q. They talk about in terms of
9	Q. You have no independent basis	9	limitations on the first page, right-hand
10	to say that cosmetic talcum powder contains	10	column, they say: Studies that have examined
11	fibrous tale, correct?	11	this issue have been limited for two major
12	MS. O'DELL: Object to the	12	reasons.
13	form.	13	Is that right?
14	A. I have no independent basis,	14	A. Yes.
15	no.	15	Q. Number one, small number of
16	BY MR. ZELLERS:	16	cases, much fewer women than men have been
17	Q. You're familiar with the	17	exposed to asbestos, particularly in more
18	limitations of the research on a potential	18	heavily exposed occupational settings where
19	link between asbestos and ovarian cancer; is	19	relative risks are higher; is that right?
20	that right?	20	A. Yes.
21	MS. O'DELL: Object to the	21	Q. How many of these studies
22	form.	22	well, strike that.
23	A. I'm familiar with some research	23	Would you agree that the
23 24		24	studies in this area have been primarily
24	limitations in that question, yes.	24	studies in this area have been primarily
	Page 159		Page 161
1	BY MR. ZELLERS:	1	related to occupational exposure?
2	Q. You agree that research on the	2	A. Primarily, yes.
			A. I Illianiy, yes.
3	potential relationship between asbestos and	3	Q. How many total women have been
3 4	ovarian cancer has only considered a small	3 4	* *
			Q. How many total women have been
4	ovarian cancer has only considered a small	4	Q. How many total women have been studied?
4 5	ovarian cancer has only considered a small number of cases; is that right?	4 5	Q. How many total women have been studied?  MS. O'DELL: Object to the
4 5 6	ovarian cancer has only considered a small number of cases; is that right?  MS. O'DELL: Object to the form.	4 5 6	Q. How many total women have been studied?  MS. O'DELL: Object to the form. In this study, in this paper, or are you talking about in general?
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4 5 6 7 8	ovarian cancer has only considered a small number of cases; is that right?  MS. O'DELL: Object to the form.  A. Well, it's considered thousands	4 5 6 7 8	Q. How many total women have been studied?  MS. O'DELL: Object to the form. In this study, in this paper, or are you talking about in general?  MR. ZELLERS: In general.
4 5 6 7 8 9	ovarian cancer has only considered a small number of cases; is that right?  MS. O'DELL: Object to the form.  A. Well, it's considered thousands of cases. Certainly in terms of the number	4 5 6 7 8 9	Q. How many total women have been studied?  MS. O'DELL: Object to the form. In this study, in this paper, or are you talking about in general?  MR. ZELLERS: In general.  A. I don't know the answer to
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4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	ovarian cancer has only considered a small number of cases; is that right?  MS. O'DELL: Object to the form.  A. Well, it's considered thousands of cases. Certainly in terms of the number of women who have experienced ovarian cancer it's small, but it's significant, and that's where we get research from that answers important questions.  BY MR. ZELLERS:  Q. Are you familiar with the Reid paper, 2011?  A. Yes, but it's been a while since I've looked at it.  Q. Well, I'll hand you a copy.  We'll mark it as Exhibit 17.  (Carson Deposition Exhibit 17	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Q. How many total women have been studied?  MS. O'DELL: Object to the form. In this study, in this paper, or are you talking about in general?  MR. ZELLERS: In general.  A. I don't know the answer to that.  BY MR. ZELLERS:  Q. How many women have been studied in nonoccupational studies?  A. Well, very few in comparison to the occupational studies.  Q. Are you aware of the difficulties that have existed over time in distinguishing between peritoneal mesothelioma and ovarian cancer?  A. Yes.  Q. What are those difficulties?

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	Page 162		Page 164
1	similar under light microscopy, and they're	1	take a minute to refresh yourself on
2	often difficult to distinguish, even by a	2	the page
3	pathologist, unless special tests are used.	3	MR. ZELLERS: I'm looking under
4	Often these cases occur in	4	Discussion.
5	places where they don't have the access to	5	MS. O'DELL: please feel
6	special test equipment that can definitively	6	free to do that.
7	distinguish, and so they are classified and	7	Excuse me, sir, I was talking.
8	we move on.	8	If you need to review the paper,
9	Q. Another limitation of any	9	Dr. Carson, please feel free to do
10	studies in this area relate to the inability	10	that.
11	to account for nonoccupational risk factors	11	MR. ZELLERS: This doctor has
12	for ovarian cancer other than age; is that	12	given 35 depositions. He is perfectly
13		13	capable of handling himself. He does
14	right?	14	
15	MS. O'DELL: Object to the form.	15	not need your advice as we go along.
			MS. O'DELL: Nor do I, Michael.
16	A. Are you reading also from this	16	So I'm going to deal with this witness
17	paper or	17	in the way I choose, which is
18	BY MR. ZELLERS:	18	perfectly appropriate. If Dr. Carson
19	Q. I was looking now at the	19	needs to review the paper, he's going
20	Camargo paper. Are you familiar with the	20	to review the paper. You may ask him
21	Camargo paper?	21	questions, he'll be happy to respond.
22	A. If you have a copy of that, I'd	22	MR. ZELLERS: Your job is not
23	like to look at it, if I'm going to answer	23	to coach the witness; your job is to
24	questions about it.	24	make objections as to form or
	Page 163		Page 165
1	Q. All right. This is a paper in	1	foundation, not to make speaking
2	2011. We'll mark it as Exhibit 18.	2	objections and coaching of the
3	(Carson Deposition Exhibit 18	3	witness.
4	marked.)	4	MS. O'DELL: If you have a
5	BY MR. ZELLERS:	5	question, I'm sure Dr. Carson would be
6	Q. Here the authors also looked at	6	happy to address it.
7	the issue of occupational exposure to	7	MR. ZELLERS: I've asked him
8	asbestos and ovarian cancer; is that right?	8	the question.
9	A. Yes.	9	MS. O'DELL: Would you mind
10	Q. If you turn to page 216 I'm	10	repeating the question, please?
11	sorry, 1216, second-to-last paragraph before	11	MR. ZELLERS: Sure.
12	the conclusion: A further limitation of our	12	THE WITNESS: I don't remember
13	analysis was its inability to account for	13	the question.
14	nonoccupational risk factors for ovarian	14	MR. ZELLERS: Okay. I'll be
15	cancer other than age.	15	happy to repeat it.
16	Is that identified by the	16	BY MR. ZELLERS:
	authors as a limitation?	17	
17		18	Q. Dr. Carson, you've looked at
18	A. Yes, it is.		this Camargo paper; is that right?
19	Q. Under if you go a page back,	19	A. Yes.
20	1215, under Discussion, in the second	20	Q. In their discussion, they talk
21	paragraph, the authors talk about other	21	about other research, including research done
22	studies that have been done in this area,	22	by Edelman; is that right?
23	including Edelman; is that right?	23	A. Are you at the top of the
24	MS. O'DELL: If you need to	24	middle column on

1 Q. I'm looking under Discussion. 2 A. Yes. 3 Q. The first well, the second 4 paragraph. 5 A. Second paragraph, yes. 6 Q. The magnitude of the pooled 6 estimate is similar to that reported by 8 Edelman; is that right? 9 A. Correct. Correct. 10 Q. Then they state: They 11 concluded, however, that despite the positive 12 and significant association, there was 13 insufficient information to infer that 14 ovarian cancers were caused by occupational 15 exposure to asbestos because of concerns 16 about tumor misclassification, inappropriate 17 comparison populations and the failure to 18 take into account for known risk factors. 19 Did I read that 20 A. You read that correctly. 21 Q. All right. Are women who use 22 tale perineally at greater risk of 23 mesothelioma? 24 A. I can't say that they are, but  Page 167  they may be. Q. Wouldn't you expect to find higher rates of other cancers in women using talc like mesothelioma if they are being exposed to substantial amounts of asbestos? A. Well, we may we may be seeing some mesotheliomas and not relating talc application as a pertinent contributor to 10 Q. Do you have an opinion or		<del>-</del>		Page 160
2 Q. The first — well, the second 3 Ms. O'DELL: Object to the form.  A. Second paragraph, yes. 5 A. Second paragraph, yes. 6 Q. The magnitude of the pooled estimate is similar to that reported by 7 estimate is similar to that reported by 8 Edelman; is that right? 8 oncluded, however, that despite the positive 11 concluded, however, that despite the positive 12 and significant association, there was 13 insufficient information to infer that 14 ovarian cancer serve caused by occupational 15 exposure to asbestos because of concerns 16 about tumor misclassification, inappropriate 17 comparison populations and the failure to 18 take into account for known risk factors. 19 Did I read that — 19 Did I read that — 20 A. You read that correctly. 21 Q. All right. Are women who use 22 tale perineally at greater risk of 23 mesothelioma? 4 A. I can't say that they are, but 24 misclassified as ovarian cancers in women using 14 tale like mesothelioma if they are being 24 A. Well, we may — we may be seeing mesotheliomas and not relating tale application as a pertinent contributor to 11 that case. 2 Q. You told us earlier that you 16 thought that there may have been more 18 step-wise improvements, and I — but I agree with that statement. 20 Ry MR. ZELLERS: 20 A. I think I said there have been 17 G. You other as the more 18 step-wise improvements, and I — but I agree with that statement. 20 Ry MR. ZELLERS: 20 Ry Do you have an opinion or knowledge as to the amounts of chromium, cobalt and nickel, if any, in tale; 30 Ry Servismal quantities in some deposits and are present in small amounts. 50 Chem. 17 G. Do you have any idea how much overse as the covaries. 3 tree with that statement. 3 G. Po you that some does, and it is — it remains in the tale until long after it reaches the ovaries. 3 tree higher 18 G. Po you that some does, and it is — it remains in the tale until long after it reaches the ovaries. 3 tree higher 19 G. Shouldn't we have seen higher 19 G. Shouldn't we have seen higher 19 G. Shouldn't we have seen higher 19 G.	4	Page 166	_	Page 168
Q. The first - well, the second 4 paragraph. A. Second paragraph, yes. 6 Q. The magnitude of the pooled 7 estimate is similar to that reported by 8 Edelman; is that right? 9 A. Correct. Correct. 10 Q. Then they state: They 11 concluded, however, that despite the positive 12 and significant association, there was 13 insulfficient information to infer that 14 ovarian cancers were caused by occupational 15 exposure to asbestos because of concerns 16 about tumor misclassification, inappropriate 17 comparison populations and the failure to 18 take into account for known risk factors. 19 Did I read that 20 A. You read that correctly. 21 Q. All right. Are women who use 22 tale perineally at greater risk of 23 mesothelioma? 24 A. I can't say that they are, but 25 they may be. 26 Q. Wouldn't you expect to find 3 higher rates of other cancers in women using 4 tale like mesothelioma if they are being 5 exposed to substantial amounts of asbestos? 6 A. Well, we may - we may be 6 be seeing mosm mesotheliomas and not relating tale 10 application as a pertinent contributor to 11 that case. 2 Q. You told us earlier that you 12 thought that there may have been more 13 they may be. 2 Q. Wouldn't you expect to find 1 application as a pertinent contributor to 1 that case. 2 Q. Wouldn't you expect to find 2 application as a pertinent contributor to 1 that case. 2 Q. You told us carlier that you 1 thought that there may have been more 2 asbestos in talcum powders in the 1970s; is 2 that right? 3 A. That is right. 4 A. Those metal elements are 1 included as usually as impurities or in 2 characteristic famy, in tale; and it is represented in small amounts. 4 A. I think it said there have been 18 step-wise improvements, and I but I agree 19 with that statement. 20 Q. Shouldn't we have seen higher 21 Q. Shouldn't we have seen higher 22 traches the ovaries. 23 traches the ovaries.				
4 paragraph. 5 A. Second paragraph, yes. 6 Q. The magnitude of the pooled 7 estimate is similar to that reported by 8 Edelman; is that right? 9 A. Correct. Correct. 10 Q. Then they state: They 11 concluded, however, that despite the positive and significant association, there was insufficient information to infer that 12 and significant association, there was insufficient information to infer that 13 ovarian cancers were caused by occupational exposure to asbestos because of concerns about tumor misclassification, inappropriate comparison populations and the failure to take into account for known risk factors. 19 Did I read that 20 A. You read that correctly. 21 Q. All right. Are women who use talc perineally at greater risk of mesothelioma? 22 talc perineally at greater risk of mesothelioma? 23 mesothelioma? 24 A. I can't say that they are, but 25 exposed to substantial amounts of asbestos? 26 A. Well, we may we may be seeing some mesotheliomas and not relating tale application as a pertinent contributor to that case. 26 A. Well, we may we may be seeing some mesotheliomas and not relating tale application as a pertinent contributor to that case. 29 A. I think I said there have been more asbestos in talcum powders in the 1970s; is that right? 20 A. I think I said there have been more with that statement. 21 Q. Shouldn't we have seen higher rates of ovarian cancers, but you have an opinion or knowledge as to the amounts of chromium, cobalt and nickel, if any, in tale? 21 A. I think I said there have been more with that statement. 22 BY MR. ZELLERS: 23 Suddes 24 Shouldn't we have seen higher rates of ovarian cancer in the earlier state ovarian cancer in the earlier tartier in treating the part of the part o				
5 A. Second paragraph, yes. 6 Q. The magnitude of the pooled 7 estimate is similar to that reported by 8 Edelman; is that right? 9 A. Correct. Correct. 10 Q. Then they state: They 11 concluded, however, that despite the positive 22 and significant association, there was 23 insufficient information to infer that 24 ovarian cancers were caused by occupational 25 exposure to absetso because of concerns 26 about tumor misclassification, inappropriate 27 comparison populations and the failure to 28 take into account for known risk factors. 29 Did I read that				•
6 Q. The magnitude of the pooled 7 estimate is similar to that reported by 8 Edelman; is that right? 9 A. Correct. Correct. 9 A. Correct Correct. 10 Q. Then they state: They 11 concluded, however, that despite the positive and significant association, there was insufficient information to infer that 12 and significant association, there was insufficient information to infer that 13 ovarian cancers were caused by occupational exposure to asbestos because of concerns about tumor misclassification, inappropriate comparison populations and the failure to take into account for known risk factors. 18 Did I read that 19 Did I read that 20 A. You read that correctly. 21 Q. All right. Are women who use 22 tale perineally at greater risk of mesothelioma? 22 tale perineally at greater risk of mesothelioma? 23 mesothelioma? 24 A. I can't say that they are, but 25 Q. Wouldn't you expect to find higher rates of other cancers in women using tale like mesothelioma if they are being exposed to substantial amounts of asbestos? 4 A. Well, we may - we may be seeing some mesotheliomas that are misclassified as ovarian cancers, or we may be seeing mesotheliomas and not relating tale application as a pertinent contributor to that case. 20 Q. You told us earlier that you thought that there may have been more assessors in talcum powders in the 1970s; is that right?  MS. O'DELL: Objection to form. A. Well, we may - we may be seeing mesotheliomas and not relating tale application as a pertinent contributor to that case.  Q. You told us earlier that you thought that there may have been more assessors in talcum powders in the 1970s; is that right?  MS. O'DELL: Objection to form. A. I think I said there have been step-wise improvements, and I but I agree with that statement.  D. Do you have an pinion or knowledge as to the amounts of chromium, cobalt and nickel, if any, in tale?  A. I think I said there have been step-wise improvements, and I but I agree with that statement.  D. Do you have any idea how much over search time the			1	
estimate is similar to that reported by  Edelman; is that right?  A. Correct. Correct.  Q. Then they state: They concluded, however, that despite the positive and significant association, there was insufficient information to infer that ovarian cancer were caused by occupational exposure to asbestos because of concerns about tumor misclassification, inappropriate comparison populations and the failure to take into account for known risk factors.  By Mr. ZELLERS: Q. Would you agree that exposure to asbestos brough a perineal cosmetic talc use is different from the heavy occupational exposure that has primarily been researched to major and that the latency period for voarian cancer is pretty long. It's greater than 20 years, often as long as 40 years. And so we're still dealing with cancers that may have started back in the '70s. BY Mr. ZELLERS: Q. Would you agree that exposure to asbestos through a perineal cosmetic talc use is different from the heavy occupational exposure that has primarily been researched to asbestos through a perineal cosmetic talc use is different from the heavy occupational exposure that has primarily been researched to MS. O'DELL: Objection to form.  A. Yes. I agree with that. BY MR. ZELLERS: Q. Are you an expert and knowledgeable about cleavage fragments? A. I munt.  Page 167  Page 169  A. I would. Q. You slow clear that the presence of carcinogenic metals, including chromium, cobalt and nickel, if any, in talc? A. Those metal elements are included as – usually as impurities or in very small quantities in some deposits and are present in small amounts.  A. I think I said there have been step-wise improvements, and I – but I agree with that statement.  BY MR. ZELLERS:  Q. Are you an expert and knowledgeable about cleavage fragments?  A. I would. Q. You told us earlier that you thought that there may have been more as abestos in talcum powders in the 1970s; is that right?  A. Think Is aid there have been  The proposition of the ye			1	
Edelman; is that right?  9 A. Correct. Correct. 10 Q. Then they state: They concluded, however, that despite the positive and significant association, there was 12 and sow ere still dealing with cancers that may have started back in the '70s. BY MR. ZELLERS: 13 insufficient information to infer that ovarian cancers were caused by occupational exposure to asbestos because of concerns about tumor misclassification, inappropriate comparison populations and the failure to take into account for known risk factors. 18 Did I read that 19 Did I read that correctly. 20 A. You read that correctly. 21 Q. All right. Are women who use 22 talc perineally at greater risk of mesothelioma? 22 talc perineally at greater risk of mesothelioma? 23 They may be. 24 A. I can't say that they are, but  25 Page 167  1 they may be. 26 Q. Wouldn't you expect to find higher rates of other cancers in women using talc like mesothelioma if they are being exposed to substantial amounts of asbestos? 3 higher rates of other cancers in women using talc like mesotheliomas and not relating talc application as a pertinent contributor to that case. 26 Q. You told us earlier that you thought that there may have been more as absetsos in talcum powders in the 1970s; is that right?  28 MR. ZELLERS: 29 A. I can't say that they are, but  10 A. Well, we may we may be seeing mesotheliomas and not relating talc application as a pertinent contributor to that case. 21 Q. You told us earlier that you thought that there may have been more as absetsos in talcum powders in the 1970s; is that right?  20 A. I think I said there have been step-wise improvements, and I but I agree with that statement. 21 Q. Shouldn't we have seen higher rates of ovarian cancer in the earlier 22 studies 23 trained as a primarily bear as the absence of a primarily bear researched may have started back in the '70s.  21 By MR. ZELLERS: 22 A. I can't tell you how much, but I can tell you that				
4 A. Correct. Correct.  9 C. Then they state: They 10 Concluded, however, that despite the positive and significant association, there was insufficient information to infer that ovarian cancers were caused by occupational exposure to asbestos because of concerns about tumor misclassification, inappropriate comparison populations and the failure to take into account for known risk factors. 19 Did I read that			1	* *
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rates of ovarian cancer in the earlier 22 it remains in the talc until long after it reaches the ovaries.				
23 studies 23 reaches the ovaries.			1	
			1	
			1	
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	Page 170		Page 172
1	natural elements; is that right?	1	to chromium, cobalt or nickel or any other
2	A. Yes.	2	heavy metal; is that right?
3	Q. They are naturally in our	3	A. That is correct.
4	bodies; is that right?	4	Q. That answer to that question
5	A. That's correct.	5	would be true if I asked you about the
6	Q. They are present in food,	6	different fragrance chemicals, correct?
7	drinking water, bottled water, vitamins; is	7	MS. O'DELL: Object to the
8	that right?	8	form.
9	A. To some extent.	9	A. Also true.
10	Q. Do you have any evidence that	10	BY MR. ZELLERS:
11	the blood or tissue levels of any trace heavy	11	Q. You did a risk assessment in
12	metals are higher in genital talc users	12	this matter; is that right?
13	compared to nonusers?	13	A. Yes.
14	MS. O'DELL: Object to the	14	Q. Do you agree that a complete
15	form.	15	and proper risk assessment involves four
16	A. I do not.	16	elements?
17	BY MR. ZELLERS:	17	MS. O'DELL: Object to the
18	Q. As we discussed when we talked	18	form.
19	about asbestos, you cannot evaluate the	19	A. Not necessarily.
20	potential effects of exposure to a substance	20	BY MR. ZELLERS:
21	without factoring in the amount of exposure;	21	Q. Well, you have to identify a
22	is that right?	22	potential hazard; is that right?
23	MS. O'DELL: Object to the	23	A. Yes.
24	form.	24	Q. You've got to do some type of
	Page 171		Page 173
1	A. It's useful to factor in the	1	dose-response assessment; is that right?
2	amount if the amount is known. If the amount	2	A. Not necessarily.
3	is not known, it's not necessarily required	3	Q. You
4	to draw conclusions.	4	MS. O'DELL: Excuse me. If you
5	BY MR. ZELLERS:	5	finished if you need to,
6	Q. In this case, you do not know	6	Dr. Carson, if you're not finished.
7	the amount, be it chromium, cobalt and/or	7	If you're finished, fine. Sorry.
8	nickel; is that right?	8	A. A qualitative risk assessment
9	MS. O'DELL: Objection to the	9	does not necessarily require a dose-response
10	form.	10	in order to reach valid conclusions.
11	Excuse me. Dr. Carson, as you	11	BY MR. ZELLERS:
12	know, is not being offered as a	12	Q. It is not necessary to do a
13	know, is not being offered as a case-specific expert, so that question	13	dose-response assessment as part of a risk
13 14	know, is not being offered as a case-specific expert, so that question sounds like a specific patient, and so	13 14	dose-response assessment as part of a risk assessment. Is that your testimony under
13 14 15	know, is not being offered as a case-specific expert, so that question sounds like a specific patient, and so I would that's my objection.	13 14 15	dose-response assessment as part of a risk assessment. Is that your testimony under oath?
13 14 15 16	know, is not being offered as a case-specific expert, so that question sounds like a specific patient, and so I would that's my objection.  A. I do not know the amount, but	13 14 15 16	dose-response assessment as part of a risk assessment. Is that your testimony under oath?  A. It's not always necessary.
13 14 15 16 17	know, is not being offered as a case-specific expert, so that question sounds like a specific patient, and so I would that's my objection.  A. I do not know the amount, but my opinion is that any within the	13 14 15 16 17	dose-response assessment as part of a risk assessment. Is that your testimony under oath?  A. It's not always necessary. Q. Was it necessary in this case?
13 14 15 16 17 18	know, is not being offered as a case-specific expert, so that question sounds like a specific patient, and so I would that's my objection.  A. I do not know the amount, but my opinion is that any within the microenvironment of the inflammatory process	13 14 15 16 17 18	dose-response assessment as part of a risk assessment. Is that your testimony under oath?  A. It's not always necessary. Q. Was it necessary in this case? A. Well, I think there is an
13 14 15 16 17 18 19	know, is not being offered as a case-specific expert, so that question sounds like a specific patient, and so I would that's my objection.  A. I do not know the amount, but my opinion is that any within the microenvironment of the inflammatory process that is occurring due to talc sequestration	13 14 15 16 17 18	dose-response assessment as part of a risk assessment. Is that your testimony under oath?  A. It's not always necessary. Q. Was it necessary in this case? A. Well, I think there is an aspect of dose-response that was performed in
13 14 15 16 17 18 19 20	know, is not being offered as a case-specific expert, so that question sounds like a specific patient, and so I would that's my objection.  A. I do not know the amount, but my opinion is that any within the microenvironment of the inflammatory process that is occurring due to talc sequestration is contributing to the carcinogenic	13 14 15 16 17 18 19 20	dose-response assessment as part of a risk assessment. Is that your testimony under oath?  A. It's not always necessary. Q. Was it necessary in this case? A. Well, I think there is an aspect of dose-response that was performed in the risk assessment process here.
13 14 15 16 17 18 19 20 21	know, is not being offered as a case-specific expert, so that question sounds like a specific patient, and so I would that's my objection.  A. I do not know the amount, but my opinion is that any within the microenvironment of the inflammatory process that is occurring due to talc sequestration is contributing to the carcinogenic potential.	13 14 15 16 17 18 19 20 21	dose-response assessment as part of a risk assessment. Is that your testimony under oath?  A. It's not always necessary. Q. Was it necessary in this case? A. Well, I think there is an aspect of dose-response that was performed in the risk assessment process here. Q. What dose-response assessment
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13 14 15 16 17 18 19 20 21 22 23	know, is not being offered as a case-specific expert, so that question sounds like a specific patient, and so I would that's my objection.  A. I do not know the amount, but my opinion is that any within the microenvironment of the inflammatory process that is occurring due to talc sequestration is contributing to the carcinogenic potential.  BY MR. ZELLERS:  Q. But you don't know for any	13 14 15 16 17 18 19 20 21 22 23	dose-response assessment as part of a risk assessment. Is that your testimony under oath?  A. It's not always necessary. Q. Was it necessary in this case? A. Well, I think there is an aspect of dose-response that was performed in the risk assessment process here. Q. What dose-response assessment did you make with respect to chromium, cobalt and nickel and any other heavy metal?
13 14 15 16 17 18 19 20 21 22	know, is not being offered as a case-specific expert, so that question sounds like a specific patient, and so I would that's my objection.  A. I do not know the amount, but my opinion is that any within the microenvironment of the inflammatory process that is occurring due to talc sequestration is contributing to the carcinogenic potential.  BY MR. ZELLERS:	13 14 15 16 17 18 19 20 21 22	dose-response assessment as part of a risk assessment. Is that your testimony under oath?  A. It's not always necessary. Q. Was it necessary in this case? A. Well, I think there is an aspect of dose-response that was performed in the risk assessment process here. Q. What dose-response assessment did you make with respect to chromium, cobalt

	Page 174		Page 176
1	available to do a dose-response estimate for	1	and the metals were there as the baseline
2	those metals.	2	component of the talc formation that they
3	Q. What information did you rely	3	came from.
4	or use, if any, to make a dose-response	4	BY MR. ZELLERS:
5	assessment with respect to any fragrance	5	Q. You do not know the amounts of
6	chemicals?	6	either the heavy metals or the fragrance
7	MS. O'DELL: Objection, form.	7	chemicals in the talcum powder at issue in
8	A. There is no information	8	this case, correct?
9	available to do a dose-response estimate for	9	A. That's that's correct, I
10	the fragrances.	10	don't.
11	BY MR. ZELLERS:	11	Q. You do not know well, strike
12	Q. Did you do any type of exposure	12	that. I'll withdraw that.
13	assessment in this case?	13	You brought with you an IARC
14	MS. O'DELL: Object to the	14	monograph; is that right?
15	form, vague.	15	A. I have a couple of them.
16	A. I'm not sure exactly what	16	Q. All right.
17	you're what you're asking by exposure	17	MS. O'DELL: Are we going to
18	assessment.	18	are you going to move to
19	BY MR. ZELLERS:	19	MR. ZELLERS: We can take a
20	Q. Well, an exposure assessment is	20	break if you'd like.
21	also part of a risk assessment; is that	21	MS. O'DELL: Yeah, it's been
22	right?	22	about an hour and a half.
23	A. In this risk assessment, I	23	MR. ZELLERS: Sure.
24	considered studies that are reported in the	24	THE VIDEOGRAPHER: We're off
	Page 175		Page 177
	5		1436 177
1	scientific and medical literature which have	1	
1 2	scientific and medical literature which have	1 2	the record 12:32, end of Tape 2. (Recess taken, 12:32 p.m. to
			the record 12:32, end of Tape 2.
2	scientific and medical literature which have reported the assessment of exposure in these	2	the record 12:32, end of Tape 2. (Recess taken, 12:32 p.m. to
2	scientific and medical literature which have reported the assessment of exposure in these cases in various forms, and I considered	2 3	the record 12:32, end of Tape 2. (Recess taken, 12:32 p.m. to 1:38 p.m.)
2 3 4	scientific and medical literature which have reported the assessment of exposure in these cases in various forms, and I considered those exposure assessments as being valid as reported and considered them as a whole.	2 3 4	the record 12:32, end of Tape 2.  (Recess taken, 12:32 p.m. to 1:38 p.m.)  THE VIDEOGRAPHER: We're on the
2 3 4 5	scientific and medical literature which have reported the assessment of exposure in these cases in various forms, and I considered those exposure assessments as being valid as reported and considered them as a whole.	2 3 4 5	the record 12:32, end of Tape 2.  (Recess taken, 12:32 p.m. to 1:38 p.m.)  THE VIDEOGRAPHER: We're on the record, 1:38, beginning of Tape 3.
2 3 4 5 6	scientific and medical literature which have reported the assessment of exposure in these cases in various forms, and I considered those exposure assessments as being valid as reported and considered them as a whole.  Q. Did you look at any exposure	2 3 4 5 6	the record 12:32, end of Tape 2.  (Recess taken, 12:32 p.m. to 1:38 p.m.)  THE VIDEOGRAPHER: We're on the record, 1:38, beginning of Tape 3.  BY MR. ZELLERS:
2 3 4 5 6 7	scientific and medical literature which have reported the assessment of exposure in these cases in various forms, and I considered those exposure assessments as being valid as reported and considered them as a whole.  Q. Did you look at any exposure assessment specific to the alleged heavy	2 3 4 5 6 7	the record 12:32, end of Tape 2.  (Recess taken, 12:32 p.m. to 1:38 p.m.)  THE VIDEOGRAPHER: We're on the record, 1:38, beginning of Tape 3.  BY MR. ZELLERS:  Q. Dr. Carson, when we left, we
2 3 4 5 6 7 8	scientific and medical literature which have reported the assessment of exposure in these cases in various forms, and I considered those exposure assessments as being valid as reported and considered them as a whole.  Q. Did you look at any exposure assessment specific to the alleged heavy metals contained in talcum powder?	2 3 4 5 6 7 8	the record 12:32, end of Tape 2.  (Recess taken, 12:32 p.m. to 1:38 p.m.)  THE VIDEOGRAPHER: We're on the record, 1:38, beginning of Tape 3.  BY MR. ZELLERS:  Q. Dr. Carson, when we left, we were talking about the trace metals and
2 3 4 5 6 7 8 9	scientific and medical literature which have reported the assessment of exposure in these cases in various forms, and I considered those exposure assessments as being valid as reported and considered them as a whole.  Q. Did you look at any exposure assessment specific to the alleged heavy metals contained in talcum powder?  MS. O'DELL: Object to the	2 3 4 5 6 7 8 9	the record 12:32, end of Tape 2.  (Recess taken, 12:32 p.m. to 1:38 p.m.)  THE VIDEOGRAPHER: We're on the record, 1:38, beginning of Tape 3.  BY MR. ZELLERS:  Q. Dr. Carson, when we left, we were talking about the trace metals and fragrance chemicals in talcum powder,
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2 3 4 5 6 7 8 9 10 11 12 13	scientific and medical literature which have reported the assessment of exposure in these cases in various forms, and I considered those exposure assessments as being valid as reported and considered them as a whole.  Q. Did you look at any exposure assessment specific to the alleged heavy metals contained in talcum powder?  MS. O'DELL: Object to the form.  A. No, I did not. BY MR. ZELLERS: Q. Did you look at any exposure	2 3 4 5 6 7 8 9 10 11 12 13	the record 12:32, end of Tape 2.  (Recess taken, 12:32 p.m. to 1:38 p.m.)  THE VIDEOGRAPHER: We're on the record, 1:38, beginning of Tape 3.  BY MR. ZELLERS:  Q. Dr. Carson, when we left, we were talking about the trace metals and fragrance chemicals in talcum powder, correct?  A. Yes.  Q. You do not know how much of these trace metals or fragrance chemicals
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2 3 4 5 6 7 8 9 10 11 12 13 14 15	scientific and medical literature which have reported the assessment of exposure in these cases in various forms, and I considered those exposure assessments as being valid as reported and considered them as a whole.  Q. Did you look at any exposure assessment specific to the alleged heavy metals contained in talcum powder?  MS. O'DELL: Object to the form.  A. No, I did not.  BY MR. ZELLERS:  Q. Did you look at any exposure assessment with respect to any fragrance chemicals contained within talcum powder?	2 3 4 5 6 7 8 9 10 11 12 13 14 15	the record 12:32, end of Tape 2.  (Recess taken, 12:32 p.m. to 1:38 p.m.)  THE VIDEOGRAPHER: We're on the record, 1:38, beginning of Tape 3.  BY MR. ZELLERS:  Q. Dr. Carson, when we left, we were talking about the trace metals and fragrance chemicals in talcum powder, correct?  A. Yes.  Q. You do not know how much of these trace metals or fragrance chemicals reach the ovaries, correct?  A. I don't know specifically how
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	scientific and medical literature which have reported the assessment of exposure in these cases in various forms, and I considered those exposure assessments as being valid as reported and considered them as a whole.  Q. Did you look at any exposure assessment specific to the alleged heavy metals contained in talcum powder?  MS. O'DELL: Object to the form.  A. No, I did not. BY MR. ZELLERS: Q. Did you look at any exposure assessment with respect to any fragrance chemicals contained within talcum powder?  MS. O'DELL: Object to the form.  A. With respect to the fragrance	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	the record 12:32, end of Tape 2.  (Recess taken, 12:32 p.m. to 1:38 p.m.)  THE VIDEOGRAPHER: We're on the record, 1:38, beginning of Tape 3.  BY MR. ZELLERS:  Q. Dr. Carson, when we left, we were talking about the trace metals and fragrance chemicals in talcum powder, correct?  A. Yes.  Q. You do not know how much of these trace metals or fragrance chemicals reach the ovaries, correct?  A. I don't know specifically how much reaches it, but if I know it's a
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	scientific and medical literature which have reported the assessment of exposure in these cases in various forms, and I considered those exposure assessments as being valid as reported and considered them as a whole.  Q. Did you look at any exposure assessment specific to the alleged heavy metals contained in talcum powder?  MS. O'DELL: Object to the form.  A. No, I did not. BY MR. ZELLERS: Q. Did you look at any exposure assessment with respect to any fragrance chemicals contained within talcum powder?  MS. O'DELL: Object to the form.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	the record 12:32, end of Tape 2.  (Recess taken, 12:32 p.m. to 1:38 p.m.)  THE VIDEOGRAPHER: We're on the record, 1:38, beginning of Tape 3.  BY MR. ZELLERS:  Q. Dr. Carson, when we left, we were talking about the trace metals and fragrance chemicals in talcum powder, correct?  A. Yes.  Q. You do not know how much of these trace metals or fragrance chemicals reach the ovaries, correct?  A. I don't know specifically how much reaches it, but if I know it's a component of the talc, and if I know the talc
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	scientific and medical literature which have reported the assessment of exposure in these cases in various forms, and I considered those exposure assessments as being valid as reported and considered them as a whole.  Q. Did you look at any exposure assessment specific to the alleged heavy metals contained in talcum powder?  MS. O'DELL: Object to the form.  A. No, I did not. BY MR. ZELLERS: Q. Did you look at any exposure assessment with respect to any fragrance chemicals contained within talcum powder?  MS. O'DELL: Object to the form.  A. With respect to the fragrance	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	the record 12:32, end of Tape 2.  (Recess taken, 12:32 p.m. to 1:38 p.m.)  THE VIDEOGRAPHER: We're on the record, 1:38, beginning of Tape 3.  BY MR. ZELLERS:  Q. Dr. Carson, when we left, we were talking about the trace metals and fragrance chemicals in talcum powder, correct?  A. Yes.  Q. You do not know how much of these trace metals or fragrance chemicals reach the ovaries, correct?  A. I don't know specifically how much reaches it, but if I know it's a component of the talc, and if I know the talc reaches it, then I know some of the metals
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	scientific and medical literature which have reported the assessment of exposure in these cases in various forms, and I considered those exposure assessments as being valid as reported and considered them as a whole.  Q. Did you look at any exposure assessment specific to the alleged heavy metals contained in talcum powder?  MS. O'DELL: Object to the form.  A. No, I did not. BY MR. ZELLERS: Q. Did you look at any exposure assessment with respect to any fragrance chemicals contained within talcum powder?  MS. O'DELL: Object to the form.  A. With respect to the fragrance chemicals and the heavy metals, the only	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	the record 12:32, end of Tape 2.  (Recess taken, 12:32 p.m. to 1:38 p.m.)  THE VIDEOGRAPHER: We're on the record, 1:38, beginning of Tape 3.  BY MR. ZELLERS:  Q. Dr. Carson, when we left, we were talking about the trace metals and fragrance chemicals in talcum powder, correct?  A. Yes.  Q. You do not know how much of these trace metals or fragrance chemicals reach the ovaries, correct?  A. I don't know specifically how much reaches it, but if I know it's a component of the talc, and if I know the talc reaches it, then I know some of the metals and the fragrances reach it.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	scientific and medical literature which have reported the assessment of exposure in these cases in various forms, and I considered those exposure assessments as being valid as reported and considered them as a whole.  Q. Did you look at any exposure assessment specific to the alleged heavy metals contained in talcum powder?  MS. O'DELL: Object to the form.  A. No, I did not.  BY MR. ZELLERS:  Q. Did you look at any exposure assessment with respect to any fragrance chemicals contained within talcum powder?  MS. O'DELL: Object to the form.  A. With respect to the fragrance chemicals and the heavy metals, the only exposure assessment that I was able to do was	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	the record 12:32, end of Tape 2.  (Recess taken, 12:32 p.m. to 1:38 p.m.)  THE VIDEOGRAPHER: We're on the record, 1:38, beginning of Tape 3.  BY MR. ZELLERS:  Q. Dr. Carson, when we left, we were talking about the trace metals and fragrance chemicals in talcum powder, correct?  A. Yes.  Q. You do not know how much of these trace metals or fragrance chemicals reach the ovaries, correct?  A. I don't know specifically how much reaches it, but if I know it's a component of the talc, and if I know the talc reaches it, then I know some of the metals and the fragrances reach it.  Q. You don't know the component or the amount of either the trace metals or the
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	scientific and medical literature which have reported the assessment of exposure in these cases in various forms, and I considered those exposure assessments as being valid as reported and considered them as a whole.  Q. Did you look at any exposure assessment specific to the alleged heavy metals contained in talcum powder?  MS. O'DELL: Object to the form.  A. No, I did not.  BY MR. ZELLERS:  Q. Did you look at any exposure assessment with respect to any fragrance chemicals contained within talcum powder?  MS. O'DELL: Object to the form.  A. With respect to the fragrance chemicals and the heavy metals, the only exposure assessment that I was able to do was verify that these things were present in	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	the record 12:32, end of Tape 2.  (Recess taken, 12:32 p.m. to 1:38 p.m.)  THE VIDEOGRAPHER: We're on the record, 1:38, beginning of Tape 3.  BY MR. ZELLERS:  Q. Dr. Carson, when we left, we were talking about the trace metals and fragrance chemicals in talcum powder, correct?  A. Yes.  Q. You do not know how much of these trace metals or fragrance chemicals reach the ovaries, correct?  A. I don't know specifically how much reaches it, but if I know it's a component of the talc, and if I know the talc reaches it, then I know some of the metals and the fragrances reach it.  Q. You don't know the component or
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	scientific and medical literature which have reported the assessment of exposure in these cases in various forms, and I considered those exposure assessments as being valid as reported and considered them as a whole.  Q. Did you look at any exposure assessment specific to the alleged heavy metals contained in talcum powder?  MS. O'DELL: Object to the form.  A. No, I did not. BY MR. ZELLERS:  Q. Did you look at any exposure assessment with respect to any fragrance chemicals contained within talcum powder?  MS. O'DELL: Object to the form.  A. With respect to the fragrance chemicals and the heavy metals, the only exposure assessment that I was able to do was verify that these things were present in materials.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	the record 12:32, end of Tape 2.  (Recess taken, 12:32 p.m. to 1:38 p.m.)  THE VIDEOGRAPHER: We're on the record, 1:38, beginning of Tape 3.  BY MR. ZELLERS:  Q. Dr. Carson, when we left, we were talking about the trace metals and fragrance chemicals in talcum powder, correct?  A. Yes.  Q. You do not know how much of these trace metals or fragrance chemicals reach the ovaries, correct?  A. I don't know specifically how much reaches it, but if I know it's a component of the talc, and if I know the talc reaches it, then I know some of the metals and the fragrances reach it.  Q. You don't know the component or the amount of either the trace metals or the fragrance chemicals in the baby powder,

Page 180  1 Q. You do not know the exposure of any of the women who are plaintiffs in this litigation to the talcum powder, correct?  4 MS. O'DELL: Individual women?  5 MR. ZELLERS: Yes, individual women?  6 Women.  7 A. I don't, no.  8 BY MR. ZELLERS: Yes, individual women?  8 MR. ZELLERS: Yes, individual women?  9 Q. You brought with you an IARC monographs, and I think you've got several monographs that are on your literature list; is that right?  13 A. That's correct.  14 Q. Generally, IARC classifies ehemicals and agents from Group 1, earningenic to humans, down to Group 4, probably not carcinogenic to humans; is that right?  13 A. That's correct.  14 Q. Does the classification of a usubstance as a known probable or possible carcinogen to JARC, and IARC is International 2d Agency for Research on Cancer, or by the MS. O'DELL: Object to the form.  1 Environmental Protection Agency, mean that the substance can cause all types of cancers in humans by any exposure route?  1 A. And different toutes of exposure.  1 Q. You can have an agent that is a carcinogen or a probable or possible carcinogen for on etype of cancer, or that may be associated with different cancers that may be associated or a carcinogen for on etype of cancer, or exposure.  1 Q. You can have an agent that is a carcinogen for on etype of cancer, or exposure, orrect?  2 A. That's correct.  3 Q. You can have an agent that is a carcinogen for on etype of cancer, orrect?  4 A. And different routes of exposure for a chemical or agent but is not chemical or agent but is not carcin				
any of the women who are plaintiffs in this litigation to the talcum powder, correct?  4 MS. O'DELL: Individual women?  5 MR. ZELLERS: Yes, individual  6 women.  7 A. I don't, no.  8 BY MR. ZELLERS:  9 Q. You brought with you an IARC monograph, and I think you've got several monographs that are on your literature list; is that right?  13 A. That's correct.  14 Q. Generally, IARC classifies this right?  15 carcinogenic to humans, down to Group 4, probably not carcinogenic to humans; is that right?  16 a A. That's correct.  17 Q. Do you know the forms of chromium, nickel and cobalt detected in cosmetic talc?  18 A. That's correct.  19 Q. Generally, IARC classifies that right?  10 A. That's correct.  11 guestion of a guestion of a guestion say a carcinogen by IARC, and IARC is International Agency for Research on Cancer, or by the Antional Toxicology Program or the U.S.  19 A. No.  10 Page 179  11 Environmental Protection Agency, mean that the substance can cause all types of cancers in humans by any exposure route?  10 A. No.  11 Environmental Protection Agency, mean that the substance can cause all types of cancers in humans by any exposure route?  10 A. And different routes of exposure.  11 Q. You can have an agent that is a carcinogen or a probable or possible charming and the protection of the carcinogen or a probable or possible charming and the protection of the carcinogen or a probable or possible charming and the protection of the protection of the carcinogen or a probable or possible charming and the protection of the protection of the carcinogen or a probable or possible charming and the protection of the protectio		Page 178		Page 180
ilitigation to the talcum powder, correct?  4	1		1	
MS. O'DELL: Individual women?  MR. ZELLERS: Yes, individual  MR. ZELLERS: Yes, individual  MR. ZELLERS: Yes, individual  MR. ZELLERS:  Q. You brought with you an IARC  monograph, and I think you've got several  monographs and are on your literature list;  is that right?  A. That's correct.  Q. Generally, IARC classifies  chemicals and agents from Group 1,  probably not carcinogenic to humans; is that  right?  A. That's correct.  Q. Does the classification of a  substance as a known probable or possible  carcinogen by IARC, and IARC is International  Agency for Research on Cancer, or by the  National Toxicology Program or the U.S.  Page 179  Environmental Protection Agency, mean that the substance can cause all types of cancers in humans by any exposure route?  MS. O'DELL: Object to the form.  A. No.  BY MR. ZELLERS:  Q. You ware not, at least in this litigation today, expressing any opinion as to the valence state of chromium that may be found in cosmetic tale?  A. That's correct.  Do you know the forms of chromium, nickel and cobalt detected in cosmetic tale?  A. Ther's - metal ions are cosmetic tale?  A. There's - metal ions are silicate crystal.  Q. I'm not sure if that answers my question, and if it does, I don't understand, so let me ask again.  Do you know the forms of chromium, nickel and cobalt detected in cosmetic tale?  A. That's correct.  120  Q. Does the classification of a  121  substance as a known probable or possible carcinogen by IARC, and IARC is International 224  NS. O'DELL: Object to the form.  5 Illigation today, expressing any opinion as to the valence state of chromium that may be found in cosmetic tale?  MS. O'DELL: Object to the form.  5 Illigation today, expressing any opinion as to the valence state of chromium that the perineal use of talcum powder results in direct exposure to the ovaries either via  127  A. Well, it's primarily through the female reproductive tract. The inhalation exposure would be a secondary route.  Q. Let me ask you a couple of questions, and if it does, I don'	2		2	
5 MR. ZELLERS: Yes, individual 6 women. 6 Women. 6 N. Yes. 7 A. 1 don't, no. 8 BY MR. ZELLERS: Yes, individual 7 A. 1 don't, no. 8 BY MR. ZELLERS: Yes, individual 8 women. 6 A. No. 7 BY MR. ZELLERS: 9 C. There are different cancers that the substance can cause all types of cancers in humans by any exposure route? 10 A. No, I'm not. 10 A. No, I'm not. 11 A. And different cancers that may be associated with different chemicals or a gents; is that right? 10 C. You can have an agent that is a carcinogen for one type of cancer, correct? 11 A. That's correct. 12 C. You can have an agent that is a carcinogen for one type of cancer, correct? 12 C. You can have an agent that is a carcinogen for one type of cancer, correct? 13 C. A. That's correct. 14 C. There are different route of exposure, correct? 15 C. Poscure for different route of exposure, correct? 16 MS. O'DELL: Object to the for another type of cancer, correct? 17 A. That's correct. 19 C. You can have an agent that is a carcinogen for one type of cancer, correct? 19 C. You can have an agent that is a carcinogen for one type of cancer, correct? 19 C. You can have an agent that is a carcinogen for one type of cancer, correct? 19 C. You can have an agent that is a carcinogen for one type of cancer, correct? 19 C. You can have an agent but is not carcinogenic for a different route of exposure, correct? 19 C. You can have an agent but is not carcinogenic for a different route of exposure, correct? 10 C. You can characteristic form. 10 C. You can characteristic form. 10 C. You can have an agent that is a carcinogenic for a different route of exposure, correct? 10 C. You can have an agent that is a carcinogenic for a different route of exposure, correct? 10 C. You can have an agent to a carcinogenic for a different route of exposure, correct? 10 C. You can characteristic form. 10 C. You can chara	3		3	
6 A. Yes. 7 A. I don't, no. 8 BY MR. ZELLERS: 9 Q. You brought with you an IARC 10 monograph, and I think you've got several 11 monographs that are on your literature list; 12 is that right? 13 A. That's correct. 14 Q. Generally, IARC classifies 15 chemicals and agents from Group 1, 16 carcinogenic to humans, down to Group 4, 17 probably not carcinogenic to humans; is that right? 19 A. That's correct. 20 Q. Does the classification of a 21 substance as a known probable or possible 22 carcinogen by IARC, and IARC is International 23 Agency for Research on Cancer, or by the 24 National Toxicology Program or the U.S. 24 Description of A. No. 25 BY MR. ZELLERS: 26 Q. There are different cancers 3 in humans by any exposure route? 4 MS. O'DELL: Object to the 5 form. 6 A. No. 7 Page 179 10 chemical bank associated with different 11 chemicals or agents; is that right? 12 carcinogen or a probable or possible 13 carcinogen for one route of exposure, correct? 14 A. That's correct. 15 C. The state of the substance can cause all types of cancers that may be associated with different 16 chemical bank as carcinogen for one route of exposure, correct? 17 A. That's correct. 18 Q. You can have an agent that is a carcinogen for one route of exposure, correct? 18 Q. You can have an agent or a chemical that's a carcinogen for one route of exposure, correct? 20 C. You show the forms of committed in the mineral lattice, and so they are part of the magnesium situate, and so they are part of the magnesium study incorporated in the mineral lattice, and so they are part of the magnesium situative, and so they are part of the magnesium study incorporated in the mineral lattice, and so they are part of the magnesium study incorporated in the mineral lattice, and so they are part of the magnesium study incorporated in the mineral lattice, and so they are part of the magnesium study incorporated in the mineral lattice, and so they are part of the magnesium study be usually incorporated in the mineral lattice, and so they are of the magnesium	4	MS. O'DELL: Individual women?	4	, ,
A. I don't, no.  BY MR. ZELLERS: 9 Q. You brought with you an IARC 10 monograph, and I think you've got several 11 monographs that are on your literature list; 12 is that right? 13 A. That's correct. 14 Q. Generally, IARC classifies 15 chemicals and agents from Group I, 16 carcinogenic to humans, down to Group 4, 17 probably not carcinogenic to humans; is that 18 right? 19 A. That's correct. 19 Q. Does the classification of a 18 substance as a known probable or possible 22 carcinogen by IARC, and IARC is International 23 Agency for Research on Cancer, or by the 24 National Toxicology Program or the U.S.  Page 179  1 Environmental Protection Agency, mean that 2 the substance can cause all types of cancers 3 in humans by any exposure route? 3 form. 4 MS. O'D'ELL: O'bject to the 5 form. 5 A. No. 6 A. No. 7 BY MR. ZELLERS: 8 Q. There are different cancers 9 that may be associated with different 10 chemicals or agents; is that right? 11 A. And different routes of 12 exposure. 13 Q. You can have an agent that is a 14 carcinogen for one type of cancer, but not 15 for another type of cancer, correct? 16 Q. You can have an agent or a 17 A. That's correct. 18 Q. You can have an agent or a 19 chemical that's a carcinogen for no route of 20 exposure for a chemical or agent but is not 21 carcinogenic for a different route of 22 exposure, or a chemical or agent but is not 23 carcinogenic to humans; is that 24 carcinogenic to humans; is that 25 that I mean valence state, of chromium or 17 nickel on the mineral lattice, 18 day to the magnesium 19 that I mean valence state, of chromium or 10 nickel or as again that is a 12 carcinogenic to humans; is that 12 that I mean valence state, of chromium or 18 ilicate crystal. 19 Do you know the forms, and by that I mean valence state, of chromium or 19 nickel or obalt dat haswers my 19 question, and if it does, I don't understand, so let me ask again. 16 A. Oh, the valence state, of chromium or 17 nickel or obalt that have been detected in cosmetic tale, correct 19 probable or possible	5	MR. ZELLERS: Yes, individual	5	on their form?
8 BY MR. ZELLERS: 9 Q. You brought with you an IARC 10 monograph, and I think you've got several 11 monographs that are on your literature list; 12 is that right? 13 A. That's correct. 14 Q. Generally, IARC classifies 15 chemicals and agents from Group 1, 16 carcinogenic to humans, down to Group 4, 17 probably not carcinogenic to humans; is that right? 18 right? 19 A. That's correct. 20 Q. Does the classification of a substance as a known probable or possible 21 assubstance as a known probable or possible 22 carcinogen by IARC, and IARC is International 23 Agency for Research on Cancer, or by the 24 National Toxicology Program or the U.S. 24 Day on the substance can cause all types of cancers in humans by any exposure route? 25 BY MR. ZELLERS: 26 Q. The not sure if that answers my question, and if it does, I don't understand, so let me ask again. 27 Do you know the forms, and by that I mean valence state, of chromium or nickel or cobalt that have been detected in cosmetic talc? 28 Q. Yes, sir. 29 A. I don't know specifically, but that's dependent on the surrounding structure that the substance can cause all types of cancers in humans by any exposure route? 4 MS. O'DELL: Object to the 5 form. 5 form. 6 A. No. 7 BY MR. ZELLERS: 8 Q. There are different cancers of the magnesium silicate crystal. 9 that I mean valence state, of chromium or nickel or cobalt that have been detected in cosmetic talc? 20 Q. Yes, sir. A. I don't know specifically, but that's dependent on the surrounding structure depending on the redox environment. 20 Q. You are not, at least in this litigation today, expressing any opinion as to the valence state of chromium that may be a scociated with different chemicals or agents; is that right? 10 A. A. And different routes of 11 By MR. ZELLERS: Q. You can have an agent that is a carcinogen for one type of cancer, correct? 16 for another type of cancer, correct? 17 A. That's correct. 18 Q. You can have an agent or a chemical or agent but is not carcinogenic for a different route of exposure, correc	6	women.	6	A. Yes.
9 Q. You brought with you an IARC 10 monograph, and I think you've got several 11 monographs that are on your literature list; 12 is that right? 13 A. That's correct. 14 Q. Generally, IARC classifies 15 chemicals and agents from Group 1, 16 carcinogenic to humans, down to Group 4, 17 probably not carcinogenic to humans; is that right? 18 right? 19 A. That's correct. 10 Q. Does the classification of a substance as a known probable or possible carcinogen by IARC, and IARC is International 22 carcinogen by IARC, and IARC is International 23 Agency for Research on Cancer, or by the National Toxicology Program or the U.S. 20 Page 179 21 Environmental Protection Agency, mean that the substance can cause all types of cancers in humans by any exposure route? 22 MS. O'DELL: Object to the form. 23 G. There are different cancers that may be associated with different chemicals or agents; is that right? 24 A. And different routes of carcinogen or a probable or possible carcinogen for one type of cancer, correct? 31 Q. You can have an agent that is a carcinogen for one type of cancer, correct? 32 Q. You can have an agent that is a carcinogenic for a different route of exposure, correct? 34 Q. You can have an agent that is a carcinogenic for a different route of exposure, correct? 35 MS. O'DELL: Objection to form. 36 A. That's correct. 37 A. That's correct. 38 Q. You can have an agent that is a carcinogenic for a different route of exposure, correct? 39 C. You can have an agent to that is a carcinogenic for a different route of exposure, correct? 40 A. That's correct. 41 C. The mate valence state; of chordium that may be socondary roved. 42 C. The mask you a couple of exposure, correct? 43 C. The mate valence state, of chromium or nickel or cobalt that have been detected in cosmetic tale? 44 A. I that the metals are contained in, and metals can assume a different valence state of thornium that may be found in cosmeti	7	A. I don't, no.	7	Q. Do you know the forms of
monograph, and I think you've got several monographs that are on your literature list; lat right?  A. That's correct.  Q. Generally, IARC classifies chemicals and agents from Group 1, carcinogenic to humans, down to Group 4, right?  A. That's correct.  Page 179  Environmental Protection Agency, mean that the substance can cause all types of cancers in humans by any exposure route?  A. No.  BY MR. ZELLERS: Q. The are different cancers that may be associated with different chemicals or agent but is not carcinogen for on er type of cancer, correct?  A. That's correct.  Q. You can have an agent or a chemical that's a carcinogen for on date for a different route of exposure for a different route of exposure, Correct?  MS. O'D'ELL: Objection to form.  A. That's correct.  C. Yes, sir.  A. I don't know specifically, but that's dependent on the surrounnding structure  Page 179  Page 179  Page 179  Page 179  Page 179  Page 179  A. That's correct.  By MR. ZELLERS: Q. You are not, at least in this litigation today, expressing any opinion as to the valence state of chromium that may be found in cosmetic tale, correct?  MS. O'D'ELL: Object to the for another type of cancer, correct?  A. That's correct.  A. That's correct	8	BY MR. ZELLERS:	8	chromium, nickel and cobalt detected in
monograph, and I think you've got several monographs that are on your literature list; lat right?  A. That's correct.  Q. Generally, IARC classifies chemicals and agents from Group 1, carcinogenic to humans, down to Group 4, right?  A. That's correct.  Page 179  Environmental Protection Agency, mean that the substance can cause all types of cancers in humans by any exposure route?  A. No.  BY MR. ZELLERS: Q. The are different cancers that may be associated with different chemicals or agent but is not carcinogen for on er type of cancer, correct?  A. That's correct.  Q. You can have an agent or a chemical that's a carcinogen for on date for a different route of exposure for a different route of exposure, Correct?  MS. O'D'ELL: Objection to form.  A. That's correct.  C. Yes, sir.  A. I don't know specifically, but that's dependent on the surrounnding structure  Page 179  Page 179  Page 179  Page 179  Page 179  Page 179  A. That's correct.  By MR. ZELLERS: Q. You are not, at least in this litigation today, expressing any opinion as to the valence state of chromium that may be found in cosmetic tale, correct?  MS. O'D'ELL: Object to the for another type of cancer, correct?  A. That's correct.  A. That's correct	9	Q. You brought with you an IARC	9	cosmetic tale?
monographs that are on your literature list; is that right?  A. That's correct.  Q. Generally, IARC classifies  chemicals and agents from Group 1, continuous and it does, I don't understand, so let me ask again.  Do you know the forms, and by that I mean valence state, of chromium or nickel or cobalt that have been detected in cosmetic tale.  A. That's correct.  Q. Does the classification of a substance as a known probable or possible carcinogen for No.  Page 179  Page 179  Page 179  Page 179  Environmental Protection Agency, mean that the substance can cause all types of cancers in humans by any exposure route?  M. No.  BY MR. ZELLERS:  Q. You can have an agent that is a carcinogen for one type of cancer, correct?  A. That's correct.  Q. You can have an agent that is a carcinogen for one type of cancer, corposure of exposure for a different route of exposure, correct?  MS. O'DELL: Objection to form.	10		10	A. There's metal ions are
12 and so they are part of the magnesium silicate crystal.  13 A. That's correct.  14 Q. Generally, IARC classifies 14 carcinogenic to humans, down to Group 4, 16 carcinogenic to humans; is that right? 18 right? 19 A. That's correct. 20 Q. Does the classification of a 20 cosmetic tale? 21 substance as a known probable or possible 22 carcinogen by IARC, and IARC is International 23 Agency for Research on Cancer, or by the National Toxicology Program or the U.S.  24 National Toxicology Program or the U.S.  25 Page 179  1 Environmental Protection Agency, mean that the substance can cause all types of cancers in humans by any exposure route? 2 M. A. On, the valence state? 2 C. Yes, sir. 2 A. I don't know specifically, but that's dependent on the surrounding structure 2 can assume a different valence state in this litigation today, expressing any opinion as to the valence state of chromium that may be found in cosmetic tale, correct? 3 M. On Della: Object to the chemicals or agents; is that right? 4 A. And different concers 4 carcinogen for one type of cancer, correct? 4 A. That's correct. 5 Q. You can have an agent that is a carcinogen for one type of cancer, correct? 6 A. That's correct. 7 A. That's correct. 8 Q. You can have an agent that is a carcinogen for a chemical to a gent to a chemical that's a carcinogen for a deferent conte of exposure for a chemical or agent but is not carcinogenic for a different route of exposure for a chemical or agent but is not carcinogenic for a different route of exposure, correct?  MS. O'DELL: Objection to form.  12 A. That's correct. 12 C. You can have an agent that is a carcinogen for one type of cancer, correct? 16 C. You can have an agent or a chemical or agent but is not carcinogenic for a different route of exposure for a chemical or agent but is not carcinogenic for a different route of exposure for a chemical or agent but is not carcinogenic for a different route of exposure, correct?  MS. O'DELL: Objection to form.	11		11	usually incorporated in the mineral lattice,
A. That's correct.  Q. Generally, IARC classifies carcinogenic to humans, down to Group 4, probably not carcinogenic to humans; is that right?  A. That's correct.  Q. Does the classification of a carcinogen by IARC, and IARC is International carcinogen	12	- · ·	12	
14   Q. Generally, IARC classifies   14   Q. Îm not sure if that answers my chemicals and agents from Group 1,   15   16   carcinogenic to humans, down to Group 4,   16   probably not carcinogenic to humans; is that right?   18   17   18   18   17   18   18   17   18   18	13	e e e e e e e e e e e e e e e e e e e	13	
carcinogenic to humans, down to Group 4, probably not carcinogenic to humans; is that right?  A. That's correct.  Q. Does the classification of a substance as a known probable or possible carcinogen by IARC, and IARC is International Agency for Research on Cancer, or by the National Toxicology Program or the U.S.  Page 179  Environmental Protection Agency, mean that the substance can cause all types of cancers in humans by any exposure route?  MS. O'DELL: Object to the form.  BY MR. ZELLERS:  Q. You can have an agent that is a carcinogen for one type of cancer, or but not for another type of cancer, correct?  A. That's correct.  Q. You can have an agent or a carcinogenic for a different route of exposure, or a compact of the content of the carcinogenic for a different route of exposure, or rect?  MS. O'DELL: Objection to form.  A. That's correct.  15	14	O. Generally, IARC classifies	14	•
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Agency for Research on Cancer, or by the National Toxicology Program or the U.S.  Page 179  Environmental Protection Agency, mean that the substance can cause all types of cancers in humans by any exposure route?  MS. O'DELL: Object to the form.  A. No.  BY MR. ZELLERS:  Q. There are different cancers that may be associated with different chemicals or agents; is that right?  A. And different routes of carcinogen for one type of cancer, but not for another type of cancer, correct?  A. That's correct.  Q. You can have an agent to a chemical or agent but is not carcinogenic for a chemical or agent but				
Page 179  Environmental Protection Agency, mean that the substance can cause all types of cancers in humans by any exposure route?  MS. O'DELL: Object to the form.  BY MR. ZELLERS:  Q. There are different cancers that may be associated with different ochemicals or agents; is that right?  A. And different routes of exposure.  Q. You are have an agent that is a carcinogen for one type of cancer, correct?  A. That's correct.  Q. You can have an agent or a chemical that's a carcinogenic for a chemical that's a carcinogenic for a chemical or agent by the form.  Page 179  Page 181  that the metals are contained in, and metals can assume a different valence state depending on the redox environment.  Q. You are not, at least in this litigation today, expressing any opinion as to the valence state of chromium that may be found in cosmetic tale, correct?  MS. O'DELL: Object to the form.  A. No, I'm not.  BY MR. ZELLERS:  Q. You are not, at least in this litigation today, expressing any opinion as to the valence state of chromium that may be found in cosmetic tale, correct?  MS. O'DELL: Object to the form.  A. No, I'm not.  BY MR. ZELLERS:  Q. Your second opinion is that the perineal use of talcum powder results in direct exposure to the ovaries either via inhalation or migration through the female reproductive tract; is that right?  A. Well, it's primarily through the female reproductive tract. The inhalation exposure would be a secondary route.  Q. Let me ask you a couple of questions about inhalation exposure.  You do not cite any studies in				
Page 179  Environmental Protection Agency, mean that the substance can cause all types of cancers in humans by any exposure route?  MS. O'DELL: Object to the form.  MS. O'DELL: Object to the found in cosmetic talc, correct?  MS. O'DELL: Object to the form.  MS. O'DELL: Objection to form.  Page 181  that the metals are contained in, and metals can assume a different valence state of depending on the redox environment.  Q. You are not, at least in this litigation today, expressing any opinion as to the valence state of chromium that may be found in cosmetic talc, correct?  MS. O'DELL: Object to the form.  MS. O'DELL: Object to the form.  A. No, I'm not.  BY MR. ZELLERS:  Q. You second opinion is that the perineal use of talcum powder results in direct exposure to the ovaries either via inhalation or migration through the female reproductive tract; is that right?  A. Well, it's primarily through the female reproductive tract. The inhalation exposure would be a secondary route.  A. Well, it's primarily through the female reproductive tract. The inhalation exposure would be a secondary route.  Carcinogenic for a different route of exposure, correct?  MS. O'DELL: Objection to form.  Page 18  that the metals are contained in, and metals depending on the redox environment.  Lead of the valence state of chromium that may be found in cosmetic tale, correct?  A. No, I'm not.  BY MR. ZELLERS:  Q. You are not, at least in this found in cosmetic tale, correct?  A. Well, it's			1	
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2 exposure.  Q. You can have an agent that is a 1 carcinogen or a probable or possible 1 direct exposure to the ovaries either via 1 direct exposure to the ovaries either via 1 inhalation or migration through the female 1 for another type of cancer, but not 1 for another type of cancer, correct? 1 A. That's correct. 1 A. Well, it's primarily through 1 direct exposure to the ovaries either via 1 inhalation or migration through the female 2 reproductive tract; is that right? 2 A. Well, it's primarily through 3 the female reproductive tract. The 3 inhalation exposure would be a secondary 4 route. 4 C. Your second opinion is that the 4 perineal use of talcum powder results in 4 direct exposure to the ovaries either via 5 inhalation or migration through the female 6 reproductive tract; is that right? 7 A. Well, it's primarily through 7 the female reproductive tract. The 8 inhalation exposure would be a secondary 8 route. 9 carcinogenic for a different route of 9 carcinogenic for a different route of 9 questions about inhalation exposure. 9 Q. Let me ask you a couple of 9 questions about inhalation exposure. 9 You do not cite any studies in			1	
Q. You can have an agent that is a carcinogen or a probable or possible direct exposure to the ovaries either via direct exposure to the ovaries either via inhalation or migration through the female reproductive tract; is that right?  A. That's correct. 17 A. Well, it's primarily through the female reproductive tract; is that right?  Q. You can have an agent or a 18 the female reproductive tract. The inhalation exposure would be a secondary exposure for a chemical or agent but is not carcinogenic for a different route of exposure, correct? 22 questions about inhalation exposure.  MS. O'DELL: Objection to form. 23 You do not cite any studies in				
carcinogen or a probable or possible  carcinogen for one type of cancer, but not  for another type of cancer, correct?  A. That's correct.  Q. You can have an agent or a  chemical that's a carcinogen for one route of  exposure for a chemical or agent but is not  carcinogenic for a different route of  exposure, correct?  MS. O'DELL: Objection to form.  direct exposure to the ovaries either via  inhalation or migration through the female  reproductive tract; is that right?  A. Well, it's primarily through  the female reproductive tract. The  inhalation exposure would be a secondary  route.  Q. Let me ask you a couple of  questions about inhalation exposure.  You do not cite any studies in		•	1	
carcinogen for one type of cancer, but not for another type of cancer, correct?  A. That's correct.  Q. You can have an agent or a chemical that's a carcinogen for one route of exposure for a different route of exposure, correct?  MS. O'DELL: Objection to form.  inhalation or migration through the female reproductive tract; is that right?  A. Well, it's primarily through the female reproductive tract. The inhalation exposure would be a secondary route.  Q. Let me ask you a couple of questions about inhalation exposure. You do not cite any studies in				
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Q. You can have an agent or a  18 the female reproductive tract. The  19 chemical that's a carcinogen for one route of 20 exposure for a chemical or agent but is not 21 carcinogenic for a different route of 22 exposure, correct? 23 MS. O'DELL: Objection to form.  18 the female reproductive tract. The inhalation exposure would be a secondary 20 route.  21 Q. Let me ask you a couple of questions about inhalation exposure. You do not cite any studies in			1	
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MS. O'DELL: Objection to form. 23 You do not cite any studies in				
· · · · · · · · · · · · · · · · · · ·		<u> -</u>		
A. Yes. 24 the body of your report evidencing that			1	•
	∠4	A. Yes.	24	the body of your report evidencing that

	Page 182		Page 184
1	talcum powder can reach the ovaries through	1	A. The I'm sorry. The Heller
2	inhalation, correct?	2	study was talc, which I didn't cite here.
3	MS. O'DELL: Object to the	3	Halme was a retrograde menstruation study via
4	form.	4	the fallopian tubes, and Sjösten was starch
5	A. That is correct, although	5	particles.
6	there yes, that's correct.	6	Q. The only study and this is
7	BY MR. ZELLERS:	7	not one that you cited, but you've now
8	Q. You have never performed any	8	referred to that involved talc, was Heller;
9	study yourself pertaining to whether inhaled	9	is that right?
10	talc can migrate to the ovaries; is that	10	A. Well, it looked at it didn't
11	right?	11	look at transport inasmuch as it looked at
12	A. I have not, although it has	12	the presence of talc particles in the ovaries
13	been used as an explanation of how talc	13	and found them with or without the history of
14	particles might have reached the ovaries in	14	talc powder use.
15	persons who did not have another form of	15	Q. Heller looked at 24 patients;
16	exposure.	16	is that right?
17	Q. If inhalation is the exposure	17	A. I don't know, but that sounds
18	path for tale, shouldn't the lungs bear more	18	about right.
19	of a burden?	19	Q. Half of them had a history of
20	A. Yes.	20	using talc products, half did not?
21	Q. Why, then, isn't there an	21	MS. O'DELL: Object to form.
22	epidemic of mesothelioma in women who use	22	A. That's correct.
23	talcum powder?	23	BY MR. ZELLERS:
24	A. Because the primary route is	24	Q. Heller found talc in the
	Page 183		Page 185
1	Page 183 perineal via the reproductive tract.	1	Page 185 tissues of all 24 patients; is that right?
1 2		1 2	
	perineal via the reproductive tract.  Q. You discuss that on page 7 of your report; is that right?		tissues of all 24 patients; is that right?  A. That is correct.  Q. I believe we covered this
2	perineal via the reproductive tract.  Q. You discuss that on page 7 of your report; is that right?  A. Yes.	2	tissues of all 24 patients; is that right?  A. That is correct.  Q. I believe we covered this before, but just to confirm: There are no
2	perineal via the reproductive tract.  Q. You discuss that on page 7 of your report; is that right?  A. Yes.  Q. You cite a number of studies	2 3	tissues of all 24 patients; is that right?  A. That is correct. Q. I believe we covered this before, but just to confirm: There are no published articles that you're aware of that
2 3 4 5 6	perineal via the reproductive tract.  Q. You discuss that on page 7 of your report; is that right?  A. Yes.  Q. You cite a number of studies for the proposition that talc can be	2 3 4	tissues of all 24 patients; is that right?  A. That is correct. Q. I believe we covered this before, but just to confirm: There are no published articles that you're aware of that show granulomas, fibrosis or adhesions
2 3 4 5 6 7	perineal via the reproductive tract.  Q. You discuss that on page 7 of your report; is that right?  A. Yes.  Q. You cite a number of studies for the proposition that talc can be transported from the perineum to the upper	2 3 4 5	tissues of all 24 patients; is that right?  A. That is correct.  Q. I believe we covered this before, but just to confirm: There are no published articles that you're aware of that show granulomas, fibrosis or adhesions anywhere in the reproductive tract of a woman
2 3 4 5 6	perineal via the reproductive tract.  Q. You discuss that on page 7 of your report; is that right?  A. Yes.  Q. You cite a number of studies for the proposition that talc can be transported from the perineum to the upper reproductive tract and body cavity; is that	2 3 4 5 6 7 8	tissues of all 24 patients; is that right?  A. That is correct.  Q. I believe we covered this before, but just to confirm: There are no published articles that you're aware of that show granulomas, fibrosis or adhesions anywhere in the reproductive tract of a woman as a result of external genital talc
2 3 4 5 6 7 8 9	perineal via the reproductive tract.  Q. You discuss that on page 7 of your report; is that right?  A. Yes.  Q. You cite a number of studies for the proposition that talc can be transported from the perineum to the upper reproductive tract and body cavity; is that right?	2 3 4 5 6 7 8 9	tissues of all 24 patients; is that right?  A. That is correct.  Q. I believe we covered this before, but just to confirm: There are no published articles that you're aware of that show granulomas, fibrosis or adhesions anywhere in the reproductive tract of a woman as a result of external genital talc application, correct?
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2 3 4 5 6 7 8 9 10	perineal via the reproductive tract.  Q. You discuss that on page 7 of your report; is that right?  A. Yes.  Q. You cite a number of studies for the proposition that talc can be transported from the perineum to the upper reproductive tract and body cavity; is that right?  A. That's correct.  Q. None of the articles that you	2 3 4 5 6 7 8 9 10	tissues of all 24 patients; is that right?  A. That is correct.  Q. I believe we covered this before, but just to confirm: There are no published articles that you're aware of that show granulomas, fibrosis or adhesions anywhere in the reproductive tract of a woman as a result of external genital talc application, correct?  MS. O'DELL: Object to the form.
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	perineal via the reproductive tract.  Q. You discuss that on page 7 of your report; is that right?  A. Yes.  Q. You cite a number of studies for the proposition that talc can be transported from the perineum to the upper reproductive tract and body cavity; is that right?  A. That's correct.  Q. None of the articles that you cite actually looked at whether talc can migrate from perineal application through the fallopian tubes to the ovaries, did they?  A. Let me just refresh my memory for a moment here. Egli was carbon black. Venter was radioactive technetium labeled albumin. Let me see. Blumenkrantz I have my notes here.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	tissues of all 24 patients; is that right?  A. That is correct.  Q. I believe we covered this before, but just to confirm: There are no published articles that you're aware of that show granulomas, fibrosis or adhesions anywhere in the reproductive tract of a woman as a result of external genital talc application, correct?  MS. O'DELL: Object to the form.  A. I believe that's the case, although there have been granulomas found in some cases of cancer where they reported having used talc.  BY MR. ZELLERS:  Q. Of the cases or the studies you cited here, Egli, that involved just three women, correct?
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	perineal via the reproductive tract.  Q. You discuss that on page 7 of your report; is that right?  A. Yes.  Q. You cite a number of studies for the proposition that talc can be transported from the perineum to the upper reproductive tract and body cavity; is that right?  A. That's correct.  Q. None of the articles that you cite actually looked at whether talc can migrate from perineal application through the fallopian tubes to the ovaries, did they?  A. Let me just refresh my memory for a moment here. Egli was carbon black. Venter was radioactive technetium labeled albumin. Let me see. Blumenkrantz I have my notes here.  Yeah, I can't remember what the substance was in Blumenkrantz. Sjösten, starch yeah, Blumenkrantz was retrograde	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	tissues of all 24 patients; is that right?  A. That is correct.  Q. I believe we covered this before, but just to confirm: There are no published articles that you're aware of that show granulomas, fibrosis or adhesions anywhere in the reproductive tract of a woman as a result of external genital talc application, correct?  MS. O'DELL: Object to the form.  A. I believe that's the case, although there have been granulomas found in some cases of cancer where they reported having used talc.  BY MR. ZELLERS:  Q. Of the cases or the studies you cited here, Egli, that involved just three women, correct?  A. That was just that was an experimental study of the transport of carbon particles.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	perineal via the reproductive tract.  Q. You discuss that on page 7 of your report; is that right?  A. Yes.  Q. You cite a number of studies for the proposition that talc can be transported from the perineum to the upper reproductive tract and body cavity; is that right?  A. That's correct.  Q. None of the articles that you cite actually looked at whether talc can migrate from perineal application through the fallopian tubes to the ovaries, did they?  A. Let me just refresh my memory for a moment here. Egli was carbon black. Venter was radioactive technetium labeled albumin. Let me see. Blumenkrantz I have my notes here.  Yeah, I can't remember what the substance was in Blumenkrantz. Sjösten,	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	tissues of all 24 patients; is that right?  A. That is correct.  Q. I believe we covered this before, but just to confirm: There are no published articles that you're aware of that show granulomas, fibrosis or adhesions anywhere in the reproductive tract of a woman as a result of external genital talc application, correct?  MS. O'DELL: Object to the form.  A. I believe that's the case, although there have been granulomas found in some cases of cancer where they reported having used talc.  BY MR. ZELLERS:  Q. Of the cases or the studies you cited here, Egli, that involved just three women, correct?  A. That was just that was an experimental study of the transport of carbon

	Page 186		
1	A. That's correct.	1	of all these studies that they were using
2	Q. And that means that they had	2	various particles that could be detected at
3	their legs up in the air, correct?	3	the other end, and so this was an attempt to
4	A. Correct.	4	do an experimental study which would cause no
5	Q. Those conditions well,	5	harm that would give them an answer regarding
6	strike that.	6	transport through the reproductive tract.
7	They were injected with	7	Q. In this study, particles were
8	oxytocin; is that right?	8	introduced into the reproductive tract, not
9	A. It is.	9	externally; is that right?
10	O. That was to aid in the	10	MS. O'DELL: Object to the
11	transport of the particles, correct?	11	form.
12	MS. O'DELL: Object to the	12	A. That is correct.
13	form.	13	BY MR. ZELLERS:
14	A. I believe that was the author's	14	
15	theory.	15	Q. Women were given Pitocin to stimulate uterine contractions; is that
16	meory. BY MR. ZELLERS:	16	
16 17		17	right? A. That's the same as oxytocin.
		18	
18	circumstances or conditions from a woman who		Q. And that's a yes, correct?
19	would apply a talc to her genital area	19	A. Yes.
20	standing up, correct?	20	Q. Again, as with the Egli study,
21	A. Well, they are, but I'm not	21	the women were inverted in the Trendelenburg
22	sure that that position is really pertinent	22	position with their head down, legs up when
23	to the migration of particles through the	23	the particles were administered; is that
24	reproductive tract.	24	right?
	Page 187		Page 189
1	Q. Is it your pos is it your	1	A. I believe so.
2	testimony that if a woman is in a lithotomy	2	Q. Is it possible that the
3	position with their legs up into the air,	3	radionuclides can leach from the particles?
4	that that is comparable with respect to the	4	A. I don't know the answer to
5	migration of talc to a woman who's standing	5	that, but it was radioactive technetium that
6	up and using it in her perineal region?	6	was bound to albumin.
7	A. It may be.	7	Q. The Sjösten study that you
8	Q. Are you an expert on that?	8	the same of the sa
_		_	cite, that did not use involve the
9	A. I'm not.	9	cite, that did not use involve the perineal use of talc, but an exam with a
9 10	<ul><li>A. I'm not.</li><li>Q. The authors in Egli, they</li></ul>		
		9	perineal use of talc, but an exam with a
10	Q. The authors in Egli, they	9	perineal use of talc, but an exam with a force to the cervix; is that right?
10 11	Q. The authors in Egli, they stated it was possible that the study	9 10 11	perineal use of talc, but an exam with a force to the cervix; is that right?  A. Excuse me. An exam with what?
10 11 12	Q. The authors in Egli, they stated it was possible that the study observed false positives due to sample	9 10 11 12	perineal use of talc, but an exam with a force to the cervix; is that right?  A. Excuse me. An exam with what?  Q. So it involved an exam with force to the cervix?
10 11 12 13	Q. The authors in Egli, they stated it was possible that the study observed false positives due to sample contamination because they failed to use	9 10 11 12 13	perineal use of talc, but an exam with a force to the cervix; is that right?  A. Excuse me. An exam with what?  Q. So it involved an exam with
10 11 12 13 14	Q. The authors in Egli, they stated it was possible that the study observed false positives due to sample contamination because they failed to use liquid or filter blanks as negative controls,	9 10 11 12 13 14	perineal use of talc, but an exam with a force to the cervix; is that right?  A. Excuse me. An exam with what?  Q. So it involved an exam with force to the cervix?  MS. O'DELL: Object to the
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	Page 190		Page 192
1		1	
1 2	Latin square design, and they were able at	1 2	Q. In fact, in Terry well, and
	the point of the hysterectomy of taking		let me mark it for you so you've got it in
3	samples of the fallopian tubes and washing them to determine whether or not particles	3	front of you.
4	were found in the tubes.	4	THE WITNESS: Okay. I'm going to move this binder for the time
5	BY MR. ZELLERS:	5	
6		6 7	being, if you don't mind.
7	Q. What they actually found was	8	MR. ZELLERS: Oh, yes, I'll
8 9	that, whether the women were examined with gloves with the starch particles or not, they	9	hand you the articles that I refer to, but if you need it, just pull it out.
10	-	10	THE WITNESS: Thank you.
11	found starch particles in both, both groups, correct?	11	(Carson Deposition Exhibit 19
12	A. It is true.	12	marked.)
13	Q. Tubal ligation, you refer to	13	BY MR. ZELLERS:
14	tubal ligation and use that or purport to say	14	Q. Deposition Exhibit 19 is the
15	that that supports your migration theory,	15	· •
16	correct?	16	2013 Terry meta-analysis that you referred to in your report; is that right?
17	A. It does.	17	A. Yes.
18	Q. Your testimony is that for	18	Q. That's a pooled analysis of
19	patients who have had a tubal ligation, that	19	eight studies; is that right?
20	they are at a lesser risk of the talc let	20	A. Yes.
21	me withdraw that.	21	Q. Okay. This pooled analysis of
22	Explain to us very briefly why	22	eight studies relating to genital powder use
23	you believe that tubal ligation supports your	23	and the risk of ovarian cancer shows no
24	migration theory.	24	variation in the risk in talc users based on
	Page 191		Page 193
			1030 170
1	A. If the pathway of exposure of	1	whether they had a tubal ligation or
2	the ovaries that results in ovarian cancer is	1 2	whether they had a tubal ligation or hysterectomy; is that right?
2 3	the ovaries that results in ovarian cancer is via the reproductive tract, then tubal	2 3	whether they had a tubal ligation or hysterectomy; is that right?  A. I think that's the conclusion
2 3 4	the ovaries that results in ovarian cancer is via the reproductive tract, then tubal ligation, which closes off the fallopian	2 3 4	whether they had a tubal ligation or hysterectomy; is that right?  A. I think that's the conclusion of the authors here, but it's not the
2 3 4 5	the ovaries that results in ovarian cancer is via the reproductive tract, then tubal ligation, which closes off the fallopian tubes, would interrupt that pathway and	2 3 4 5	whether they had a tubal ligation or hysterectomy; is that right?  A. I think that's the conclusion of the authors here, but it's not the conclusion of the individual authors of the
2 3 4 5 6	the ovaries that results in ovarian cancer is via the reproductive tract, then tubal ligation, which closes off the fallopian tubes, would interrupt that pathway and result in reduced exposure; therefore, you	2 3 4 5 6	whether they had a tubal ligation or hysterectomy; is that right?  A. I think that's the conclusion of the authors here, but it's not the conclusion of the individual authors of the studies who did the original investigations.
2 3 4 5 6 7	the ovaries that results in ovarian cancer is via the reproductive tract, then tubal ligation, which closes off the fallopian tubes, would interrupt that pathway and result in reduced exposure; therefore, you would expect a reduced incidence of cancer in	2 3 4 5 6 7	whether they had a tubal ligation or hysterectomy; is that right?  A. I think that's the conclusion of the authors here, but it's not the conclusion of the individual authors of the studies who did the original investigations.  Q. Well, it is the conclusion of
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	the ovaries that results in ovarian cancer is via the reproductive tract, then tubal ligation, which closes off the fallopian tubes, would interrupt that pathway and result in reduced exposure; therefore, you would expect a reduced incidence of cancer in those women.  Q. In fact, though, that is not what has been reported or at least that has not been consistently reported in the studies; is that right?  A. Well, it actually has been a positive factor in a number of the epidemiologic studies that have looked at the ovarian cancer incidence and have been able to include tubal ligation as a historical factor in their analysis.  Q. Did you look at the Terry 2013 meta-analysis?  A. Yes.  Q. You cite that in support of	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	whether they had a tubal ligation or hysterectomy; is that right?  A. I think that's the conclusion of the authors here, but it's not the conclusion of the individual authors of the studies who did the original investigations.  Q. Well, it is the conclusion of the authors based upon their meta-analysis of eight studies; is that right?  MS. O'DELL: Object to the form.  A. Let me just check that.  (Document review.)  A. Yes.  BY MR. ZELLERS:  Q. If you look at pages 819, carried over to 820, I'm reading: Our finding of slightly attenuated associations following exclusion of women with powder exposure after tubal ligation or hysterectomy are not supportive of this hypothesis, but risk estimates in this subgroup analysis may
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	the ovaries that results in ovarian cancer is via the reproductive tract, then tubal ligation, which closes off the fallopian tubes, would interrupt that pathway and result in reduced exposure; therefore, you would expect a reduced incidence of cancer in those women.  Q. In fact, though, that is not what has been reported or at least that has not been consistently reported in the studies; is that right?  A. Well, it actually has been a positive factor in a number of the epidemiologic studies that have looked at the ovarian cancer incidence and have been able to include tubal ligation as a historical factor in their analysis.  Q. Did you look at the Terry 2013 meta-analysis?  A. Yes.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	whether they had a tubal ligation or hysterectomy; is that right?  A. I think that's the conclusion of the authors here, but it's not the conclusion of the individual authors of the studies who did the original investigations.  Q. Well, it is the conclusion of the authors based upon their meta-analysis of eight studies; is that right?  MS. O'DELL: Object to the form.  A. Let me just check that.  (Document review.)  A. Yes.  BY MR. ZELLERS:  Q. If you look at pages 819, carried over to 820, I'm reading: Our finding of slightly attenuated associations following exclusion of women with powder exposure after tubal ligation or hysterectomy are not supportive of this hypothesis, but

	Page 194		Page 196
1	size.	1	THE WITNESS: Thank you.
2	Is that right?	2	MS. O'DELL: Thank you.
3	A. Yes.	3	BY MR. ZELLERS:
4	Q. Essentially, looking at these	4	Q. This is also a study,
5	eight studies in this meta-analysis, Terry	5	Exhibit 20, Cramer 2016, that you cite as
6	did not find that exposure to genital powder	6	supportive of your opinions in this case,
7	applications that occurred before tubal	7	correct?
8	ligation or hysterectomy made any substantive	8	A. Correct.
9	difference in the results; is that right?	9	Q. Cramer actually looked at
10	A. Yes, but the point is that the	10	whether or not there was any greater
11	authors didn't find that it did not make a	11	association of talc use and ovarian cancer
12	difference either. They they ended up	12	and whether or not women who had a tubal
13	with a study with reduced numbers that they	13	ligation or hysterectomy had a reduced
14	couldn't make determinations about.	14	incidence of the disease; is that correct?
15		15	A. Yes.
16	Q. If, though, the migration	16	
	theory is correct, you would expect that		Q. Turn to page 337, and then it
17	there would be a reduction in the incidence	17	carries over to 339. They're talking
18	of ovarian cancer for women who have had a	18	they, being the authors of their results,
19	tubal ligation or hysterectomy; is that	19	and I'm reading just at the very bottom of
20	right?	20	337, carried over to 339: By test for
21	MS. O'DELL: Object to the	21	interaction, column 3, the association was
22	form.	22	significantly greater for women who were
23	A. Yes, that is correct.	23	African-American, had no personal history of
24	///	24	breast cancer, had a tubal ligation or
	Page 195		Page 197
1	BY MR. ZELLERS:	1	hysterectomy.
2	Q. And that was not found in the	2	Is that right?
3	Terry meta-analysis that you cite; is that	3	MS. O'DELL: Object to the
4	right?	4	form.
5	MS. O'DELL: Object to the	5	A. Beginning on page 337?
6	form.	6	BY MR. ZELLERS:
7	A. That is correct, but it was	7	Q. Yes.
8	found in the baseline studies that were, in	8	*
8 9	found in the baseline studies that were, in part, included in this meta-analysis.	8 9	A. I'm sorry, if you could
9	part, included in this meta-analysis.		<ul><li>A. I'm sorry, if you could</li><li>Q. Sure. At the very end of 337.</li></ul>
9 10	part, included in this meta-analysis. BY MR. ZELLERS:	9	<ul><li>A. I'm sorry, if you could</li><li>Q. Sure. At the very end of 337.</li><li>A. Okay.</li></ul>
9 10 11	part, included in this meta-analysis. BY MR. ZELLERS: Q. Are you you also cite the	9 10	<ul> <li>A. I'm sorry, if you could</li> <li>Q. Sure. At the very end of 337.</li> <li>A. Okay.</li> <li>Q. So they're looking at</li> </ul>
9	part, included in this meta-analysis. BY MR. ZELLERS: Q. Are you you also cite the Cramer study, 2016; is that right?	9 10 11	<ul> <li>A. I'm sorry, if you could</li> <li>Q. Sure. At the very end of 337.</li> <li>A. Okay.</li> <li>Q. So they're looking at</li> <li>A. Oh, by tests for interaction.</li> </ul>
9 10 11 12 13	part, included in this meta-analysis.  BY MR. ZELLERS:  Q. Are you you also cite the Cramer study, 2016; is that right?  A. Yes.	9 10 11 12 13	<ul> <li>A. I'm sorry, if you could</li> <li>Q. Sure. At the very end of 337.</li> <li>A. Okay.</li> <li>Q. So they're looking at</li> <li>A. Oh, by tests for interaction.</li> <li>Q. Yes.</li> </ul>
9 10 11 12 13 14	part, included in this meta-analysis.  BY MR. ZELLERS:  Q. Are you you also cite the Cramer study, 2016; is that right?  A. Yes.  Q. I've got a few questions for	9 10 11 12 13 14	<ul> <li>A. I'm sorry, if you could</li> <li>Q. Sure. At the very end of 337.</li> <li>A. Okay.</li> <li>Q. So they're looking at</li> <li>A. Oh, by tests for interaction.</li> <li>Q. Yes.</li> <li>A. Yeah.</li> </ul>
9 10 11 12 13 14 15	part, included in this meta-analysis.  BY MR. ZELLERS:  Q. Are you you also cite the  Cramer study, 2016; is that right?  A. Yes.  Q. I've got a few questions for you on the Cramer study, but let me just ask,	9 10 11 12 13 14	<ul> <li>A. I'm sorry, if you could</li> <li>Q. Sure. At the very end of 337.</li> <li>A. Okay.</li> <li>Q. So they're looking at</li> <li>A. Oh, by tests for interaction.</li> <li>Q. Yes.</li> <li>A. Yeah.</li> <li>Q. So if your migration theory is</li> </ul>
9 10 11 12 13 14 15	part, included in this meta-analysis.  BY MR. ZELLERS:  Q. Are you you also cite the Cramer study, 2016; is that right?  A. Yes.  Q. I've got a few questions for you on the Cramer study, but let me just ask, since we're at this part right now.	9 10 11 12 13 14 15	<ul> <li>A. I'm sorry, if you could</li> <li>Q. Sure. At the very end of 337.</li> <li>A. Okay.</li> <li>Q. So they're looking at</li> <li>A. Oh, by tests for interaction.</li> <li>Q. Yes.</li> <li>A. Yeah.</li> <li>Q. So if your migration theory is correct, you would expect there to be a lower</li> </ul>
9 10 11 12 13 14 15 16 17	part, included in this meta-analysis.  BY MR. ZELLERS:  Q. Are you you also cite the Cramer study, 2016; is that right?  A. Yes.  Q. I've got a few questions for you on the Cramer study, but let me just ask, since we're at this part right now.  Do you have the Cramer study?	9 10 11 12 13 14 15 16	A. I'm sorry, if you could Q. Sure. At the very end of 337. A. Okay. Q. So they're looking at A. Oh, by tests for interaction. Q. Yes. A. Yeah. Q. So if your migration theory is correct, you would expect there to be a lower incidence of ovarian cancer in women who have
9 10 11 12 13 14 15 16 17 18	part, included in this meta-analysis.  BY MR. ZELLERS:  Q. Are you you also cite the Cramer study, 2016; is that right?  A. Yes.  Q. I've got a few questions for you on the Cramer study, but let me just ask, since we're at this part right now.  Do you have the Cramer study? I'll hand it to you.	9 10 11 12 13 14 15 16 17	A. I'm sorry, if you could Q. Sure. At the very end of 337. A. Okay. Q. So they're looking at A. Oh, by tests for interaction. Q. Yes. A. Yeah. Q. So if your migration theory is correct, you would expect there to be a lower incidence of ovarian cancer in women who have had a tubal ligation or hysterectomy,
9 10 11 12 13 14 15 16 17 18	part, included in this meta-analysis.  BY MR. ZELLERS:  Q. Are you you also cite the Cramer study, 2016; is that right?  A. Yes.  Q. I've got a few questions for you on the Cramer study, but let me just ask, since we're at this part right now.  Do you have the Cramer study?  I'll hand it to you.  A. If you have a copy, I'd	9 10 11 12 13 14 15 16 17 18	A. I'm sorry, if you could Q. Sure. At the very end of 337. A. Okay. Q. So they're looking at A. Oh, by tests for interaction. Q. Yes. A. Yeah. Q. So if your migration theory is correct, you would expect there to be a lower incidence of ovarian cancer in women who have had a tubal ligation or hysterectomy, correct?
9 10 11 12 13 14 15 16 17 18 19 20	part, included in this meta-analysis.  BY MR. ZELLERS:  Q. Are you you also cite the Cramer study, 2016; is that right?  A. Yes.  Q. I've got a few questions for you on the Cramer study, but let me just ask, since we're at this part right now.  Do you have the Cramer study?  I'll hand it to you.  A. If you have a copy, I'd appreciate it.	9 10 11 12 13 14 15 16 17 18 19 20	A. I'm sorry, if you could Q. Sure. At the very end of 337. A. Okay. Q. So they're looking at A. Oh, by tests for interaction. Q. Yes. A. Yeah. Q. So if your migration theory is correct, you would expect there to be a lower incidence of ovarian cancer in women who have had a tubal ligation or hysterectomy, correct?  MS. O'DELL: Object to the
9 10 11 12 13 14 15 16 17 18 19 20 21	part, included in this meta-analysis.  BY MR. ZELLERS:  Q. Are you you also cite the Cramer study, 2016; is that right?  A. Yes.  Q. I've got a few questions for you on the Cramer study, but let me just ask, since we're at this part right now.  Do you have the Cramer study? I'll hand it to you.  A. If you have a copy, I'd appreciate it.  MR. ZELLERS: Sure. We'll mark	9 10 11 12 13 14 15 16 17 18 19 20 21	A. I'm sorry, if you could Q. Sure. At the very end of 337. A. Okay. Q. So they're looking at A. Oh, by tests for interaction. Q. Yes. A. Yeah. Q. So if your migration theory is correct, you would expect there to be a lower incidence of ovarian cancer in women who have had a tubal ligation or hysterectomy, correct?  MS. O'DELL: Object to the form.
9 10 11 12 13 14 15 16 17 18 19 20 21 22	part, included in this meta-analysis.  BY MR. ZELLERS:  Q. Are you you also cite the Cramer study, 2016; is that right?  A. Yes.  Q. I've got a few questions for you on the Cramer study, but let me just ask, since we're at this part right now.  Do you have the Cramer study? I'll hand it to you.  A. If you have a copy, I'd appreciate it.  MR. ZELLERS: Sure. We'll mark the Cramer study as Exhibit 20.	9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. I'm sorry, if you could Q. Sure. At the very end of 337. A. Okay. Q. So they're looking at A. Oh, by tests for interaction. Q. Yes. A. Yeah. Q. So if your migration theory is correct, you would expect there to be a lower incidence of ovarian cancer in women who have had a tubal ligation or hysterectomy, correct?  MS. O'DELL: Object to the form. A. That is correct.
9 10 11 12 13 14 15 16 17 18 19 20 21	part, included in this meta-analysis.  BY MR. ZELLERS:  Q. Are you you also cite the Cramer study, 2016; is that right?  A. Yes.  Q. I've got a few questions for you on the Cramer study, but let me just ask, since we're at this part right now.  Do you have the Cramer study? I'll hand it to you.  A. If you have a copy, I'd appreciate it.  MR. ZELLERS: Sure. We'll mark	9 10 11 12 13 14 15 16 17 18 19 20 21	A. I'm sorry, if you could Q. Sure. At the very end of 337. A. Okay. Q. So they're looking at A. Oh, by tests for interaction. Q. Yes. A. Yeah. Q. So if your migration theory is correct, you would expect there to be a lower incidence of ovarian cancer in women who have had a tubal ligation or hysterectomy, correct?  MS. O'DELL: Object to the form.

1			
1	Page 198		Page 200
1	test for interaction the association was	1	to talcum powder?
2	significantly greater for women who and	2	MS. O'DELL: Object to the
3	then I'm skipping African-American, but I'm	3	form.
4	coming down to have a tubal ligation or	4	A. It doesn't it doesn't
5	hysterectomy.	5	eliminate exposure, but it does remove
6	Is that correct?	6	residual exposure, as does sweating, other
7	A. Yes.	7	body secretions and so forth.
8	Q. All right. If talcum powder	8	BY MR. ZELLERS:
9	migrates from the perineal region to the	9	Q. Are you aware of any studies
10	ovaries, shouldn't exposure to exposure to	10	that show inflammation or oxidative stress as
11	talc be far greater in concentration in the	11	a result of genital talc use in the rectal,
12	rectal, vulvar, vaginal, cervical and uterine	12	vulvar, vaginal, cervical and uterine
13	tissues which are closer to the area of	13	tissues?
14	initial exposure?	14	A. No, I'm not.
15	MS. O'DELL: Objection to form.	15	Q. Under your theory or belief
16	A. Well, the acute exposure would	16	that talcum powder travels from the perineal
17	be greater.	17	region to the ovaries through the woman's
18	BY MR. ZELLERS:	18	reproductive tract, talcum powder must travel
19	Q. You would expect because the	19	past the labia, through the vagina, through
20	acute exposure is greater, that there should	20	the cervix, and then to the uterus; is that
21		21	
22	be inflammation caused in these organs and areas, correct?	22	right? A. That's correct.
23		23	
24		24	Q. And then the powder travels
24	oxidative stress is an ongoing process that	24	through the uterus and into the fallopian
	Page 199		Page 201
1	has to develop over time, and it occurs on a	1	. 1
		I T	tubes to reach the ovaries; is that right?
2	chronic basis in areas where foreign bodies	2	tubes to reach the ovaries; is that right?  A. Yes.
3	chronic basis in areas where foreign bodies locate and reside. And talc and talcum		A. Yes.
	locate and reside. And talc and talcum	2	<ul><li>A. Yes.</li><li>Q. On what studies are you relying</li></ul>
3 4	locate and reside. And talc and talcum powder are examples of foreign bodies that	2 3 4	<ul><li>A. Yes.</li><li>Q. On what studies are you relying to say that talcum powder affects the body</li></ul>
3	locate and reside. And talc and talcum powder are examples of foreign bodies that have the right characteristics to cause	2 3	A. Yes. Q. On what studies are you relying to say that talcum powder affects the body differently when it's applied to the perineal
3 4 5	locate and reside. And talc and talcum powder are examples of foreign bodies that	2 3 4 5	A. Yes. Q. On what studies are you relying to say that talcum powder affects the body differently when it's applied to the perineal region and travels to the cervix compared to
3 4 5 6	locate and reside. And talc and talcum powder are examples of foreign bodies that have the right characteristics to cause chemotaxis in reactive oxygen species and oxidative status.	2 3 4 5 6	A. Yes. Q. On what studies are you relying to say that talcum powder affects the body differently when it's applied to the perineal region and travels to the cervix compared to when it is applied directly to the cervix?
3 4 5 6 7 8	locate and reside. And talc and talcum powder are examples of foreign bodies that have the right characteristics to cause chemotaxis in reactive oxygen species and oxidative status.  Q. Well, in fact, there would be	2 3 4 5 6 7	A. Yes. Q. On what studies are you relying to say that talcum powder affects the body differently when it's applied to the perineal region and travels to the cervix compared to when it is applied directly to the cervix? A. I don't think
3 4 5 6 7	locate and reside. And talc and talcum powder are examples of foreign bodies that have the right characteristics to cause chemotaxis in reactive oxygen species and oxidative status.  Q. Well, in fact, there would be chronic exposure, so if we're dealing with,	2 3 4 5 6 7 8	A. Yes. Q. On what studies are you relying to say that talcum powder affects the body differently when it's applied to the perineal region and travels to the cervix compared to when it is applied directly to the cervix?
3 4 5 6 7 8	locate and reside. And talc and talcum powder are examples of foreign bodies that have the right characteristics to cause chemotaxis in reactive oxygen species and oxidative status.  Q. Well, in fact, there would be chronic exposure, so if we're dealing with, as you described in the very beginning, which	2 3 4 5 6 7 8 9	A. Yes. Q. On what studies are you relying to say that talcum powder affects the body differently when it's applied to the perineal region and travels to the cervix compared to when it is applied directly to the cervix?  A. I don't think MS. O'DELL: Object to the form.
3 4 5 6 7 8 9	locate and reside. And talc and talcum powder are examples of foreign bodies that have the right characteristics to cause chemotaxis in reactive oxygen species and oxidative status.  Q. Well, in fact, there would be chronic exposure, so if we're dealing with, as you described in the very beginning, which you were asked, to look at the habitual use	2 3 4 5 6 7 8 9	A. Yes. Q. On what studies are you relying to say that talcum powder affects the body differently when it's applied to the perineal region and travels to the cervix compared to when it is applied directly to the cervix?  A. I don't think MS. O'DELL: Object to the form. A there is much of a
3 4 5 6 7 8 9 10 11	locate and reside. And talc and talcum powder are examples of foreign bodies that have the right characteristics to cause chemotaxis in reactive oxygen species and oxidative status.  Q. Well, in fact, there would be chronic exposure, so if we're dealing with, as you described in the very beginning, which	2 3 4 5 6 7 8 9 10 11	A. Yes. Q. On what studies are you relying to say that talcum powder affects the body differently when it's applied to the perineal region and travels to the cervix compared to when it is applied directly to the cervix?  A. I don't think MS. O'DELL: Object to the form. A there is much of a difference.
3 4 5 6 7 8 9 10 11 12	locate and reside. And talc and talcum powder are examples of foreign bodies that have the right characteristics to cause chemotaxis in reactive oxygen species and oxidative status.  Q. Well, in fact, there would be chronic exposure, so if we're dealing with, as you described in the very beginning, which you were asked, to look at the habitual use of talcum powder, that would create exposure on a chronic basis to the rectal area and	2 3 4 5 6 7 8 9 10 11 12 13	A. Yes. Q. On what studies are you relying to say that talcum powder affects the body differently when it's applied to the perineal region and travels to the cervix compared to when it is applied directly to the cervix?  A. I don't think MS. O'DELL: Object to the form. A there is much of a difference. BY MR. ZELLERS:
3 4 5 6 7 8 9 10 11 12 13	locate and reside. And talc and talcum powder are examples of foreign bodies that have the right characteristics to cause chemotaxis in reactive oxygen species and oxidative status.  Q. Well, in fact, there would be chronic exposure, so if we're dealing with, as you described in the very beginning, which you were asked, to look at the habitual use of talcum powder, that would create exposure on a chronic basis to the rectal area and tissues, vulvar, vaginal, cervical and	2 3 4 5 6 7 8 9 10 11 12 13 14	A. Yes. Q. On what studies are you relying to say that talcum powder affects the body differently when it's applied to the perineal region and travels to the cervix compared to when it is applied directly to the cervix?  A. I don't think MS. O'DELL: Object to the form. A there is much of a difference.  BY MR. ZELLERS: Q. You would expect there to be a
3 4 5 6 7 8 9 10 11 12 13 14 15	locate and reside. And talc and talcum powder are examples of foreign bodies that have the right characteristics to cause chemotaxis in reactive oxygen species and oxidative status.  Q. Well, in fact, there would be chronic exposure, so if we're dealing with, as you described in the very beginning, which you were asked, to look at the habitual use of talcum powder, that would create exposure on a chronic basis to the rectal area and tissues, vulvar, vaginal, cervical and uterine tissues; is that right?	2 3 4 5 6 7 8 9 10 11 12 13 14 15	A. Yes. Q. On what studies are you relying to say that talcum powder affects the body differently when it's applied to the perineal region and travels to the cervix compared to when it is applied directly to the cervix? A. I don't think MS. O'DELL: Object to the form. A there is much of a difference. BY MR. ZELLERS: Q. You would expect there to be a comparable similar result whether talcum
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3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	locate and reside. And talc and talcum powder are examples of foreign bodies that have the right characteristics to cause chemotaxis in reactive oxygen species and oxidative status.  Q. Well, in fact, there would be chronic exposure, so if we're dealing with, as you described in the very beginning, which you were asked, to look at the habitual use of talcum powder, that would create exposure on a chronic basis to the rectal area and tissues, vulvar, vaginal, cervical and uterine tissues; is that right?  MS. O'DELL: Object to the form.  A. I suspect if one doesn't bathe, that would be more of an issue, but most	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. Yes. Q. On what studies are you relying to say that talcum powder affects the body differently when it's applied to the perineal region and travels to the cervix compared to when it is applied directly to the cervix? A. I don't think MS. O'DELL: Object to the form. A there is much of a difference. BY MR. ZELLERS: Q. You would expect there to be a comparable similar result whether talcum powder is applied directly to the cervix through the use of dusting of a diaphragm as there is to the use of talcum powder in the genital areas; is that right?
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	locate and reside. And talc and talcum powder are examples of foreign bodies that have the right characteristics to cause chemotaxis in reactive oxygen species and oxidative status.  Q. Well, in fact, there would be chronic exposure, so if we're dealing with, as you described in the very beginning, which you were asked, to look at the habitual use of talcum powder, that would create exposure on a chronic basis to the rectal area and tissues, vulvar, vaginal, cervical and uterine tissues; is that right?  MS. O'DELL: Object to the form.  A. I suspect if one doesn't bathe, that would be more of an issue, but most people bathe regularly as well.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	A. Yes. Q. On what studies are you relying to say that talcum powder affects the body differently when it's applied to the perineal region and travels to the cervix compared to when it is applied directly to the cervix? A. I don't think MS. O'DELL: Object to the form. A there is much of a difference. BY MR. ZELLERS: Q. You would expect there to be a comparable similar result whether talcum powder is applied directly to the cervix through the use of dusting of a diaphragm as there is to the use of talcum powder in the genital areas; is that right? A. That is correct. I think the
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3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	locate and reside. And talc and talcum powder are examples of foreign bodies that have the right characteristics to cause chemotaxis in reactive oxygen species and oxidative status.  Q. Well, in fact, there would be chronic exposure, so if we're dealing with, as you described in the very beginning, which you were asked, to look at the habitual use of talcum powder, that would create exposure on a chronic basis to the rectal area and tissues, vulvar, vaginal, cervical and uterine tissues; is that right?  MS. O'DELL: Object to the form.  A. I suspect if one doesn't bathe, that would be more of an issue, but most people bathe regularly as well.  BY MR. ZELLERS:  Q. And bathing regularly	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. Yes. Q. On what studies are you relying to say that talcum powder affects the body differently when it's applied to the perineal region and travels to the cervix compared to when it is applied directly to the cervix?  A. I don't think  MS. O'DELL: Object to the form.  A there is much of a difference.  BY MR. ZELLERS: Q. You would expect there to be a comparable similar result whether talcum powder is applied directly to the cervix through the use of dusting of a diaphragm as there is to the use of talcum powder in the genital areas; is that right?  A. That is correct. I think the two differ probably in terms of quantity very significantly. But other than that, they
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	locate and reside. And talc and talcum powder are examples of foreign bodies that have the right characteristics to cause chemotaxis in reactive oxygen species and oxidative status.  Q. Well, in fact, there would be chronic exposure, so if we're dealing with, as you described in the very beginning, which you were asked, to look at the habitual use of talcum powder, that would create exposure on a chronic basis to the rectal area and tissues, vulvar, vaginal, cervical and uterine tissues; is that right?  MS. O'DELL: Object to the form.  A. I suspect if one doesn't bathe, that would be more of an issue, but most people bathe regularly as well. BY MR. ZELLERS:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. Yes. Q. On what studies are you relying to say that talcum powder affects the body differently when it's applied to the perineal region and travels to the cervix compared to when it is applied directly to the cervix? A. I don't think MS. O'DELL: Object to the form. A there is much of a difference. BY MR. ZELLERS: Q. You would expect there to be a comparable similar result whether talcum powder is applied directly to the cervix through the use of dusting of a diaphragm as there is to the use of talcum powder in the genital areas; is that right? A. That is correct. I think the two differ probably in terms of quantity very

	Dama 202		Daga 204
	Page 202		Page 204
1	region, talcum powder would also be in close	1	about to reconsider that?
2	contact with a woman's urethra; is that	2	A. Because the chatter is that
3	right?	3	this is something that's on their radar
4	A. Yes.	4	screen currently.
5	Q. Substances, and in your view,	5	Q. What chatter are you aware of?
6	talcum powder, are capable of traveling up	6	And what is chatter?
7	the urethra; is that right?	7	A. It's discussion among within
8	MS. O'DELL: Object to the	8	the scientific and healthcare community of
9	form.	9	things that are on the drawing board for
10	A. The urethra has a sphincter	10	IARC.
11	which prevents transport beyond that point.	11	Q. Do you know whether or not
12	BY MR. ZELLERS:	12	IARC well, strike that.
13	Q. Women get urinary tract	13	IARC has not changed its
14	infections when bacteria travels up the	14	position that the migration theory and
15	urethra; is that right?	15	evidence for the migration theory is weak; is
16	A. That's correct.	16	that right?
17	Q. Studies, though, do not show an	17	MS. O'DELL: Object to the
18	increase in bladder cancer with talcum powder	18	form.
19	use; is that right?	19	A. They have not changed their
20	A. I don't believe that talcum	20	position that was published in the 2010
21	powder transports in any appreciable amount	21	monograph.
22	up the urethra into the bladder.	22	BY MR. ZELLERS:
23	Q. Studies do not show an increase	23	
24		24	Q. All right. You have heard
24	in rectal cancer with talcum powder use, do	24	chatter that they may look at it again; is
	Page 203		Page 205
1	they?	1	that right?
2	A. No.	2	A. Yes.
3	Q. Are you aware that that IARC	l _	
	Q. The you aware that that If the	3	Q. Other than this chatter, you're
4	and you're familiar with IARC, right?	3 4	Q. Other than this chatter, you're unaware of any other well, strike that.
4 5		l	unaware of any other well, strike that.
	and you're familiar with IARC, right?  A. Yes.	4	unaware of any other well, strike that. You're unaware of any change in
5	and you're familiar with IARC, right?  A. Yes.  Q. Are you aware that IARC rejects	4 5	unaware of any other well, strike that.
5 6	and you're familiar with IARC, right?  A. Yes.	4 5 6	unaware of any other well, strike that. You're unaware of any change in IARC's position with respect to migration, correct?
5 6 7 8	and you're familiar with IARC, right?  A. Yes. Q. Are you aware that IARC rejects this migration theory and calls the evidence weak?	4 5 6 7 8	unaware of any other well, strike that. You're unaware of any change in IARC's position with respect to migration, correct? A. Well, an example of what I'm
5 6 7 8 9	and you're familiar with IARC, right?  A. Yes. Q. Are you aware that IARC rejects this migration theory and calls the evidence weak?  MS. O'DELL: Object to the	4 5 6 7 8 9	unaware of any other well, strike that. You're unaware of any change in IARC's position with respect to migration, correct? A. Well, an example of what I'm talking about is the Health Canada report,
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	Page 206		Page 208
1	primary studies, the same ones that will be	1	is that right?
2	considered by IARC.	2	A. That is correct.
3	Q. All right. As of today, IARC's	3	Q. You are not one of those
4	published position is that evidence of a	4	physicians, correct?
5	migration theory of talcum powder migrating	5	A. I don't claim to be a
6	to the ovaries is weak, correct?	6	specialist in gynecology.
7	A. Yes.	7	Q. Your third opinion is that the
8	Q. Have you conducted any tests or	8	ovaries lack an intrinsic elimination system;
9	experiments with respect to your theory or	9	is that right?
10	position that talc migrates to the ovaries	10	A. That's correct.
11	through the reproductive tract?	11	Q. Is "intrinsic elimination
12	A. No, I haven't.	12	system" a recognized term of art that's used
13	Q. How much talc actually reaches	13	by gynecologists?
14	the ovaries in your opinion?	14	A. I don't think so. It was just
15	A. I can't answer that question	15	the term I used to describe the situation.
16	because the dose has not been quantified.	16	Q. Is "intrinsic elimination
17	Q. Does it only reach the ovaries	17	system" a term of art used by oncologists?
18	during certain times?	18	A. The same answer.
19	A. I don't believe so. I think	19	Q. Have you seen published studies
20	there are many circumstances whereby that	20	that use that term?
21	migration pathway is functional, and in my	21	A. I don't know. I suspect I
22	belief, the pathway from the perineum to the	22	could have. It's apparently a small number
23	cervix is pretty much an open channel, and	23	of ways to describe that in a few words.
24	then it continues to be open pretty much all	24	Q. You do not cite to any studies
			·
	Page 207		
	Page 207		Page 209
1	the way into the pelvic cavity.	1	
1 2		1 2	in the body of your report to support your theory that the ovaries do not have an
	the way into the pelvic cavity.		in the body of your report to support your
2	the way into the pelvic cavity.  Q. You are not a specialist in	2	in the body of your report to support your theory that the ovaries do not have an
2	the way into the pelvic cavity.  Q. You are not a specialist in women's health issues, correct?	2 3	in the body of your report to support your theory that the ovaries do not have an intrinsic elimination system, correct?
2 3 4	the way into the pelvic cavity.  Q. You are not a specialist in women's health issues, correct?  MS. O'DELL: Object to the	2 3 4	in the body of your report to support your theory that the ovaries do not have an intrinsic elimination system, correct?  A. That's correct.
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2 3 4 5 6	the way into the pelvic cavity.  Q. You are not a specialist in women's health issues, correct?  MS. O'DELL: Object to the form.  A. Well, I'm a doctor. I've	2 3 4 5 6	in the body of your report to support your theory that the ovaries do not have an intrinsic elimination system, correct?  A. That's correct.  Q. You have not conducted any tests to show that exposure to the ovaries to
2 3 4 5 6 7	the way into the pelvic cavity.  Q. You are not a specialist in women's health issues, correct?  MS. O'DELL: Object to the form.  A. Well, I'm a doctor. I've examined a lot of women.  BY MR. ZELLERS:  Q. Are you	2 3 4 5 6 7	in the body of your report to support your theory that the ovaries do not have an intrinsic elimination system, correct?  A. That's correct. Q. You have not conducted any tests to show that exposure to the ovaries to particulate matter, if any, is longer than
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	the way into the pelvic cavity.  Q. You are not a specialist in women's health issues, correct?  MS. O'DELL: Object to the form.  A. Well, I'm a doctor. I've examined a lot of women.  BY MR. ZELLERS:  Q. Are you  MS. O'DELL: Excuse me. Are you finished, sir?  THE WITNESS: Yes, I'm finished.  MS. O'DELL: Okay.  BY MR. ZELLERS:  Q. Are you an expert in the women's reproductive tract?  A. I've taken it apart and put it back together again in medical school, and in other settings I've done OB/GYN rotations. I've participated in pelvic surgeries. I understand the anatomy.  Q. There are physicians who are	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	in the body of your report to support your theory that the ovaries do not have an intrinsic elimination system, correct?  A. That's correct. Q. You have not conducted any tests to show that exposure to the ovaries to particulate matter, if any, is longer than exposure to other parts of the female anatomy; is that right?  MS. O'DELL: Object to the form.  A. I have not conducted any such tests.  BY MR. ZELLERS: Q. Is the cervix more or less sensitive to the impact of foreign particles than the ovaries?  MS. O'DELL: Object to the form.  A. I think that the important point is the residence time that exists, and the cervix is not presented with things for an extended time like the ovaries are in
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	the way into the pelvic cavity.  Q. You are not a specialist in women's health issues, correct?  MS. O'DELL: Object to the form.  A. Well, I'm a doctor. I've examined a lot of women.  BY MR. ZELLERS:  Q. Are you  MS. O'DELL: Excuse me. Are you finished, sir?  THE WITNESS: Yes, I'm finished.  MS. O'DELL: Okay.  BY MR. ZELLERS:  Q. Are you an expert in the women's reproductive tract?  A. I've taken it apart and put it back together again in medical school, and in other settings I've done OB/GYN rotations. I've participated in pelvic surgeries. I understand the anatomy.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	in the body of your report to support your theory that the ovaries do not have an intrinsic elimination system, correct?  A. That's correct. Q. You have not conducted any tests to show that exposure to the ovaries to particulate matter, if any, is longer than exposure to other parts of the female anatomy; is that right?  MS. O'DELL: Object to the form. A. I have not conducted any such tests. BY MR. ZELLERS: Q. Is the cervix more or less sensitive to the impact of foreign particles than the ovaries?  MS. O'DELL: Object to the form. A. I think that the important point is the residence time that exists, and the cervix is not presented with things for

		1	
	Page 210		Page 212
1	sensitive.	1	A. Yes.
2	BY MR. ZELLERS:	2	MS. O'DELL: Object to the
3	Q. All right. Your fourth	3	form.
4	theory or strike that.	4	BY MR. ZELLERS:
5	Your fourth opinion is that the	5	Q. Are you familiar with the term
6	epidemiological studies show a positive	6	"person-years" as it relates to
7	relationship between regular perineal	7	epidemiological study?
8	application of talcum powder and ovarian	8	A. Yes, I am.
9	cancer; is that right?	9	Q. What is strike that.
10	A. That's correct.	10	How are person-years
11	Q. The studies that you reference	11	calculated?
12	in this opinion are referred to on pages 6	12	A. They are calculated by in
13	and 7 of your report; is that right?	13	relation to an exposure or to an existing
14	MS. O'DELL: Object to the	14	treatment, they're calculated by multiplying
15	form.	15	the duration of the treatment or exposure in
16	A. Most of them, yes.	16	years by the number of people being studied.
17	BY MR. ZELLERS:	17	And that the result is person-years.
18	Q. You conclude that when	18	Q. Can you explain the difference
19	confounding and bias are exhaustively	19	between high-grade serous and low-grade
20	considered and do you believe you've done	20	serous cancer?
21	that here?	21	A. High-grade serous cancer has
22	A. I am restating what authors of	22	a is less differentiated and has a greater
23	the primary studies have done. I'm	23	propensity for metastasis and invasion.
24	evaluating the consistency of the evidence,	24	Q. Are you aware that the
	ovarianting and consistency of the overest,		Q. 1220 you arrais that the
	Page 211		Page 213
1	not the basic evidence itself.	1	epidemiological literature shows that these
2	Q. The apparent cause and effect	2	are very different cancers?
3	relationship between perineal talcum powder	3	A. They behave quite differently,
4	use and ovarian cancer amounts to about a 30%	4	yes.
5	increased risk of ovarian cancer in talcum	5	Q. Do you know what publication
6	powder users.	6	bias is?
7	Is that your opinion in this	7	A. Yes.
8	case?	8	Q. What is publication bias?
9	A. It is.	9	A. Publication bias is the
10	Q. And that is your opinion from	10	tendency to to spin a certain argument
11	reviewing the epidemiologic studies that you	11	in in order to influence acceptance of
12	cite in your report?	12	publications.
13	A. Yes.	13	Q. Is that a recognized issue in
14	Q. When epidemiologists refer to	14	the field of epidemiology, at least as you've
15	the statistical power of a study, what are	15	observed?
16	they referring to?	16	A. It's a it's not necessarily
ī	A. Statistical power refers to the	17	recognized in the field of epidemiology. It
17	1		
17 18	ability of a study design, if carried out, to	18	exists in all scientific endeavors.
	*	18 19	Q. Is it something that you and
18	ability of a study design, if carried out, to		
18 19	ability of a study design, if carried out, to detect a signal in the data of a particular	19	Q. Is it something that you and
18 19 20	ability of a study design, if carried out, to detect a signal in the data of a particular magnitude.	19 20	Q. Is it something that you and other physicians and experts and scientists
18 19 20 21	ability of a study design, if carried out, to detect a signal in the data of a particular magnitude.  Q. In plain English, statistical	19 20 21	Q. Is it something that you and other physicians and experts and scientists need to be aware of?
18 19 20 21 22	ability of a study design, if carried out, to detect a signal in the data of a particular magnitude.  Q. In plain English, statistical power is the likelihood that a study will	19 20 21 22	Q. Is it something that you and other physicians and experts and scientists need to be aware of?  A. Yes. I think we're all exposed

### Page 214 Page 216 1 Q. When I asked you early on what 1 been published as well. And I felt that was 2 your methodology was, you looked at the 2 sufficient to be able to produce this report 3 published literature, you looked at some 3 that addressed the question I was asked. 4 websites I think that you told us about 4 O. As you told us earlier, you 5 earlier, and then you performed a risk 5 have never published a meta-analysis on any assessment and considered whether perineal 6 topic; is that right? 6 7 use of talc products poses a safety risk to 7 A. That's correct. 8 8 consumers; is that right? You cite to some of the 9 MS. O'DELL: Object to the 9 available studies on talcum powder use in 10 form. 10 ovarian cancer, but not to all of the 11 11 A. Well, that's a gross studies, correct? oversimplification of the risk assessment 12 12 MS. O'DELL: Object to the 13 process that I performed. 13 form. 14 The review of the literature, 14 A. That's true. 15 which was based on the question that I was 15 BY MR. ZELLERS: 16 asked to address, was a fairly exhaustive one 16 Q. What was your reasoning for 17 which incorporated a search for every 17 focusing on certain studies and excluding other studies? 18 pertinent publication that was available and 18 19 included multiple languages. 19 The studies that I referenced A. 20 It then was -- proceeded into a 20 were those that had specific aspects that 21 distillation of the facts that were -- that 21 directly influenced my report or my 22 were claimed based on those individual 22 conclusions or that I felt were illustrative 23 23 studies and investigations, and a comparison of comments I was making in the report, and 24 of those, one with another, eventually 24 that's why they were referenced. Page 215 Page 217 1 considering them all as a whole to arrive at 1 All of the studies may not have 2 conclusions that addressed the question. 2 risen to that -- the level of requiring being 3 referenced, but pretty much all the studies 3 BY MR. ZELLERS: Q. That was your methodology; is 4 are included in the literature that I 4 5 5 that right? reviewed. 6 A. That is the methodology, yes. 6 You cite in the report the 7 Did you consider the Bradford 7 studies that were favorable or supportive of 8 Hill criteria or factors in reaching your 8 your opinions, correct? 9 9 conclusions and opinions in this matter? A. Well, I cited a number of 10 That's part of the methodology 10 studies, not all of which were favorable to 11 which is outlined in my report. 11 my overall opinions, at least not on the 12 Q. In analyzing the Bradford Hill 12 surface. 13 criteria, did you conduct a meta-analysis of 13 Q. Did you cite all of the studies 14 the available data to reach a conclusion 14 that you believe in one way or another support your opinions in this case? 15 about the relative risk? 15 16 16 A. I don't think so. A. No. I did not. 17 Why didn't you conduct a 17 O. You believe there are 18 meta-analysis for this case? 18 additional studies that support your opinions 19 A. I did not have the time to do a 19 that you did not cite? 20 meta-analysis in this case, first of all. 20 They're in the literature list. A. 21 21 Secondly, there have been a number of other Did you cite the opinions that 22 meta-analyses performed, and I had those 22 refuted -- strike that. 23 results available to me in addition to 23 Did you cite the studies that 24 various reviews of the literature that have 24 refuted your opinions in this matter?

	Page 218		Page 220
1	A. I cited some studies that had	1	more detail to be able to answer that
2	opinions that or that had conclusions that	2	specifically.
3	did not necessarily agree with mine, but I	3	Q. Well, essentially, based upon
4	don't think they refuted my conclusions.	4	its analysis as of 2014, the FDA concluded
5	Q. Do you believe the standard for	5	that causation had not been established as
6	proving causation in the scientific	6	between genital talcum powder use and ovarian
7	literature is the same one that applies in	7	cancer or an increased risk of ovarian
8	this litigation?	8	cancer, correct?
9	MS. O'DELL: Object to the	9	A. Well, it said that an updated
10	form.	10	review failed to identify any new compelling
11	A. I don't know that.	11	literature data or new scientific evidence.
12	BY MR. ZELLERS:	12	I don't think they indicate here that they
13	Q. A document you brought here	13	actually did a standard review of that
14	today was an FDA letter?	14	literature.
15	A. Yeah, I think you marked it.	15	Q. Well, take a look, if you will,
16	Q. I did mark it. Why don't you	16	at page 4. The FDA sets forth its
17	see if you could find it so I can ask you a	17	epidemiology and etiology findings; is that
18	couple of questions about it.	18	right?
19	A. There it is. That one?	19	A. Yes.
20	Q. Yes. Exhibit 10 is an FDA	20	Q. The FDA has a number of very
21	letter dated April 1st of 2014 to a	21	capable physicians, scientists,
22	Dr. Epstein; is that right?	22	toxicologists, pharmacologists and medical
23	A. Yes.	23	professionals; is that right?
24	Q. That is a document that you	24	MS. O'DELL: Object to the
	Page 219		Page 221
1	reviewed and considered as part of your	1	form.
2	analysis of this case; is that right?	2	A. I don't know if they're still
3	A. Yes.	3	working, but they have good people on staff.
4	Q. Do you believe that that	4	BY MR. ZELLERS:
5	exhibit, Exhibit 10, is supportive of your	5	Q. And just so, a year or two or
6	opinions in this matter?	6	three, if this transcript is ever reviewed,
7	A. I don't think it's very	7	we are in the midst of a shutdown of at least
8	supportive. It's it's in response to a	8	portions of the government; is that right?
9	proposal from a citizens voluntary agency to	9	A. That's correct.
10	provide more stringent labeling on talcum	10	Q. And that is what your comment
11	powder products, and the agency rejected	11	was directed to, correct?
12	the that petition.	12	A. That is correct.
13	Q. The FDA is the regulatory body	13	Q. On page 4 the FDA states:
14	in the United States that oversees food, drug	14	After consideration of the scientific
15	and cosmetics; is that right?	15	literature submitted in support of both
16	MS. O'DELL: Object to the	16	citizens' petitions, FDA found.
17	form.	17	And then, number 2, that
18	A. Yes.	18	several of the studies acknowledge biases in
19	BY MR. ZELLERS:	19	the study design and no single study has
20	Q. This letter strike that.	20	considered all the factors that potentially
21	In this letter the FDA goes	21	contribute to ovarian cancer, including
22	through and analyzes some of the Bradford	22	selection bias and/or uncontrolled
23	Hill factors; is that right?	23	confounding that result in spurious positive
24	A. I'd have to look at this in	24	associations between talc use and ovarian

	Page 222		Page 224
1	cancer risk.	1	form.
2	Did I read that correctly?	2	A. That is correct.
3	A. You did read it correctly.	3	BY MR. ZELLERS:
4	Q. Does that appear to be at least	4	Q. You are a paid expert for the
5	one of the conclusions of the FDA after	5	plaintiffs in this litigation; is that right?
6	considering the scientific literature as of	6	A. That is correct.
7	early 2014?	7	Q. To your knowledge, the FDA is
8	MS. O'DELL: Object to the	8	not paid well, let me withdraw that.
9	form.	9	A. I wouldn't go out on a limb
10	A. Yes, that is listed as an FDI	10	there.
11		11	
	finding FDA finding. BY MR. ZELLERS:	12	
12			cogent biological mechanism by which talc
13	Q. The FDA noted that a	13	might lead to ovarian cancer is lacking.
14	dose-response strike that.	14	Exposure to talc does not account for all
15	The FDA noted that	15	cases of ovarian cancer and there was no
16	dose-response evidence is lacking; is that	16	scientific consensus on the proportion of
17	right?	17	ovarian cancer cases that may be caused by
18	A. A dose-response	18	talc exposure.
19	Q. Two things. The FDA notes that	19	Was that a conclusion of the
20	there's a lack of consistency in the study	20	FDA based upon its review of the
21	results, correct?	21	epidemiologic literature?
22	MS. O'DELL: Where are you	22	MS. O'DELL: Object to the
23	reading? I'm sorry.	23	form.
24	MR. ZELLERS: I'm looking at	24	A. Yes, it was, and it's one that
	Page 223		Page 225
1	Conclusion 3.	1	I also disagree with.
2	THE WITNESS: Point 3.	2	BY MR. ZELLERS:
3	A. They found that the	3	Q. IARC also considered the
4	case-control studies did not demonstrate a	4	Bradford Hill considerations; is that right?
5	consistent positive association across	5	A. Yes, it did.
6	studies; although some studies have found	6	Q. IARC rejected classification of
7	small positive associations between talc and	7	tale as a carcinogenic, instead assigning it
8	ovarian cancer, but lower confidence limits	8	to the classification of possibly
9	are often close to 1, and dose-response	9	carcinogenic to humans; is that correct?
10	evidence is lacking.	10	A. That's correct.
11	BY MR. ZELLERS:	11	Q. We've already discussed the
12	Q. That was FDA's conclusion	12	IARC categories briefly, but let's mark a
13	number 3 based upon its review of the	13	document from the IARC website as to the
14	scientific literature; is that right?	14	classifications, Exhibit 21.
15	MS. O'DELL: Object to the	15	(Carson Deposition Exhibit 21
16	form.	16	marked.)
17	A. It's correct. It's not a valid	17	BY MR. ZELLERS:
18	interpretation of the statistical results,	18	Q. Tell me if you recognize that.
19	but that was one of their findings.	19	A. Yes.
20	BY MR. ZELLERS:	20	Q. Exhibit 21 is from the IARC
21		21	
22		22	website, and it goes through the
	You disagree at least in part with their finding; is that right?	22	classifications of different agents that have been made by the International Agency for
22			DEED HISDE DV THE INTERNATIONAL AGENCY FOR
23			
23 24	MS. O'DELL: Object to the	24	Research on Cancer; is that right?

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1	A. Yes, that's correct.	1	MS. O'DELL: Object to the
2	Q. It has studied and included 120	2	form.
3	agents in the Group 1 category, which is	3	A. I think limited evidence also
4	carcinogenic to humans, correct?	4	refers to just the number of studies that
5	A. That's correct.	5	have been performed as well as the quality of
6	Q. That's the only category in	6	the studies.
7	which IARC finds sufficient evidence in	7	BY MR. ZELLERS:
8	humans, correct?	8	Q. Well, based upon the evidence
9	MS. O'DELL: Object to the	9	that is available, the studies that are
10	form.	10	available, a 2B designation by IARC means
11	A. That's the category that	11	that IARC cannot rule out chance, bias or
12	represents substances for which there is	12	confounding with reasonable confidence,
13	sufficient and irrefutable evidence of human	13	correct?
14	carcinogenesis.	14	MS. O'DELL: Objection, asked
15	BY MR. ZELLERS:	15	and answered.
16	Q. It lists 82 agents in Group 2A	16	A. Not always the case.
17	as being probably carcinogenic to humans; is	17	BY MR. ZELLERS:
18	that right?	18	Q. That's part of the definition,
19	A. That's correct.	19	isn't it?
20	Q. IARC is certainly willing to	20	A. I don't believe it applies to
21	declare agents as either a known or probable	21	every agent or every evaluation.
22	carcinogen; is that right?	22	Q. Well, I'll not take the time to
23	A. That's correct.	23	go through the IARC definitions; if we at the
24	Q. There is only one agent in	24	end of the day have extra time, we'll go back
	, ,		<b>,</b>
	Page 227		Page 229
1	Group 4, probably not carcinogenic to humans,	1	and we'll take a look.
2	correct?	2	What else is in the Class 2B,
3	A. Yes. I thought that number had	3	possibly carcinogenic. Ginkgo biloba, is
4	gone up recently, but the date here is	4	that something you're aware of that's in that
5	November 2018, so some may have been moved	5	category?
6	back into Group 3.	6	MS. O'DELL: Object to the
7	Q. So out of the over 1,000 agents	7	form.
8	that IARC has reviewed, it's only placed one	8	A. That's a biological material.
9	agent in the Group 4 category, probably not	9	BY MR. ZELLERS:
10	carcinogenic; is that right?	10	Q. Pickled vegetables?
11	A. That's correct.	11	A. That may be in Group 2B.
12	Q. There is no Group 5, not	12	Q. Occupational carpentry and
13	carcinogenic; is that right?	13	joinery?
14	A. That's correct.	14	MS. O'DELL: Objection to form.
15	Q. With genital talc, IARC	15	A. That's wood dust exposure.
16	Group 2B designation well, strike that.	16	BY MR. ZELLERS:
17	Genital tale is listed as an	17	Q. Also 2B; is that right?
18	IARC Group 2B designated substance; is that	18	A. Wood dust itself is Group 1.
19	right?	19	The occupation is Group 2B.
20	A. That's correct.	20	Q. Let me ask you about some
21	Q. That's based on limited	21	individual Bradford Hill criteria. On
	evidence in humans, which means that IARC	22	page 10 of your report, you state that you
22	· · · · · · · · · · · · · · · · · · ·		
22	cannot rule out chance, bias or confounding	23	gave the most weight to strength of
		23 24	

		1	
	Page 230		Page 232
1	plausibility; is that right?	1	been failed attempts, but they have been
2	A. That's correct.	2	attempts to estimate the quantity of powder
3	Q. How much weight did you give to	3	that you start with and the amount that
4	the other six factors?	4	results in the application to the perineum by
5	A. Sufficient.	5	using models and actually doing some
6	Q. Why did you put less weight on	6	measurements and recording activities.
7	those?	7	BY MR. ZELLERS:
8	A. Because the strength of	8	Q. You did not do any modeling or
9	association, the consistency of the evidence	9	any assessment of the quantity of baby powder
10	and the biological plausibility of perineal	10	that was involved with daily use; is that
11	talc, talcum powder application as	11	right?
12	responsible for the occurrence of ovarian	12	A. No, I relied on those others.
13	cancer was compelling.	13	Q. When you say 30% increased
14	Q. FDA focused on dose, correct?	14	risk, that's a 1.3 odds ratio; is that right?
15	A. Yes.	15	A. That's correct.
16	Q. You did not; is that right?	16	Q. And that comes largely from the
17	A. That's right.	17	case-control studies, correct?
18	Q. The first Bradford Hill factor	18	MS. O'DELL: Object to the
19	that you focused on was strength of	19	form.
20	association.	20	A. Yes, but it's also consistent
21	What association does the	21	with some of the information from the cohort
22	literature report between talc use and	22	studies.
23	ovarian cancer?	23	BY MR. ZELLERS:
24	A. Overall, evaluating the	24	Q. Epidemiologists consider a 1.3
	Page 231		Page 233
1	universe of research, epidemiologic research	1	odds ratio in a case-control study to be a
2	that's been done on this, it shows an average	2	weak or modest association; is that right?
3	30% increase in ovarian cancer risk for those	3	
4		_	MS. O'DELL: Object to the
4	who regularly apply talcum powder to the	4	MS. O'DELL: Object to the form.
5	who regularly apply talcum powder to the perineum.		· ·
		4	form.
5	perineum.	4 5	form. A. That's correct. BY MR. ZELLERS: Q. Where here we're talking only
5 6	perineum.  Q. Regular application of talcum	4 5 6	form. A. That's correct. BY MR. ZELLERS: Q. Where here we're talking only about statistical associations, not
5 6 7	perineum.  Q. Regular application of talcum powder means what?  A. It I believe that it means daily or thereabouts.	4 5 6 7	form. A. That's correct. BY MR. ZELLERS: Q. Where here we're talking only
5 6 7 8 9	perineum.  Q. Regular application of talcum powder means what?  A. It I believe that it means daily or thereabouts.  Q. In what form of application?	4 5 6 7 8 9	form. A. That's correct. BY MR. ZELLERS: Q. Where here we're talking only about statistical associations, not causation, correct? MS. O'DELL: Object to the
5 6 7 8 9 10 11	perineum.  Q. Regular application of talcum powder means what?  A. It I believe that it means daily or thereabouts.  Q. In what form of application?  A. Talcum powder.	4 5 6 7 8 9 10	form. A. That's correct. BY MR. ZELLERS: Q. Where here we're talking only about statistical associations, not causation, correct? MS. O'DELL: Object to the form.
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5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	perineum.  Q. Regular application of talcum powder means what?  A. It I believe that it means daily or thereabouts.  Q. In what form of application?  A. Talcum powder.  Q. In what amount?  A. Whatever is necessary or desired by the user.  Q. Does that vary from woman to woman?  A. It does.  Q. Did you make any attempt to assess what regular use of talcum powder was?  MS. O'DELL: Object to the form.	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	form. A. That's correct. BY MR. ZELLERS: Q. Where here we're talking only about statistical associations, not causation, correct? MS. O'DELL: Object to the form. A. Well, association eventually becomes causation when the when the evidence mounts to a point where it becomes recognized by all of the players that this is what's going on. A 30% increase may be classified by epidemiologists as weak or modest, but if you look at the number of women in this country who die each year from this fatal disease, that represents about
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	perineum.  Q. Regular application of talcum powder means what?  A. It I believe that it means daily or thereabouts.  Q. In what form of application?  A. Talcum powder.  Q. In what amount?  A. Whatever is necessary or desired by the user.  Q. Does that vary from woman to woman?  A. It does.  Q. Did you make any attempt to assess what regular use of talcum powder was?  MS. O'DELL: Object to the form.  A. There have been a couple of	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	form. A. That's correct. BY MR. ZELLERS: Q. Where here we're talking only about statistical associations, not causation, correct? MS. O'DELL: Object to the form. A. Well, association eventually becomes causation when the when the evidence mounts to a point where it becomes recognized by all of the players that this is what's going on. A 30% increase may be classified by epidemiologists as weak or modest, but if you look at the number of women in this country who die each year from this fatal disease, that represents about 3,000 lives that could potentially be saved
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	perineum.  Q. Regular application of talcum powder means what?  A. It I believe that it means daily or thereabouts.  Q. In what form of application?  A. Talcum powder.  Q. In what amount?  A. Whatever is necessary or desired by the user.  Q. Does that vary from woman to woman?  A. It does.  Q. Did you make any attempt to assess what regular use of talcum powder was?  MS. O'DELL: Object to the form.  A. There have been a couple of attempts to try to quantify what what that	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	form. A. That's correct. BY MR. ZELLERS: Q. Where here we're talking only about statistical associations, not causation, correct? MS. O'DELL: Object to the form. A. Well, association eventually becomes causation when the when the evidence mounts to a point where it becomes recognized by all of the players that this is what's going on. A 30% increase may be classified by epidemiologists as weak or modest, but if you look at the number of women in this country who die each year from this fatal disease, that represents about 3,000 lives that could potentially be saved through prevention.
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	Page 234		Page 236
1	MS. BOCKUS: Excuse me, I need	1	epidemiologists are concerned, correct?
2	to object as nonresponsive.	2	MS. O'DELL: Object to
3	MR. ZELLERS: Yes, join.	3	object to the form.
4	BY MR. ZELLERS:	4	A. It's an increased risk that
5	Q. There is not a consensus at	5	translates into human lives, so it depends on
6	this time with respect to any causation	6	your point of view.
7	relating to genital talc and ovarian cancer,	7	MS. BOCKUS: Object to form
8	is there?	8	I mean, sorry, nonresponsive, move to
9	MS. O'DELL: Objection to the	9	strike.
10	form.	10	MR. ZELLERS: Join.
11	A. I believe that that consensus	11	MS. O'DELL: Oppose.
12	is building.	12	DR. THOMPSON: Agreed.
13	BY MR. ZELLERS:	13	BY MR. ZELLERS:
14	Q. FDA that's not FDA's	14	Q. The 1.3 relative risk that you
15	position, correct?	15	believe generally applies, that would relate
16	MS. O'DELL: Object to the	16	to epithelial cancers; is that right?
17	form.	17	A. Yes.
18	A. Not at the moment.	18	Q. That's what you're limiting
19	BY MR. ZELLERS:	19	your opinions to in this case, correct?
20	Q. That's not the position of the	20	MS. O'DELL: Object to the
21	National Cancer Institute; is that right?	21	form.
22	A. That's correct.	22	A. Well, these opinions relate to
23	Q. That's not the position of the	23	several of the cancers that have shown
24	CDC; is that correct?	24	increases in these background epidemiologic
21	CDC, is that correct.		mercases in these background epidennologie
	Page 235		Page 237
1	A. That's correct.	1	studies, which include the epithelial ovarian
2	Q. IARC does not refer to any	2	cancers, including the serous; the borderline
3	association between perineal talc use and	3	cancers are also showing increases in some of
4	ovarian cancer as a strong association, does	4	the studies. So it's the group of those
5	it?	5	cancers, yes.
6	MS. O'DELL: Object to the	6	BY MR. ZELLERS:
7	form.	7	Q. The cohort studies, prospective
8	A. It calls it a Group 2B	8	cohort studies, have not shown an association
9	carcinogen, which is fairly significant.	9	between talc and ovarian cancer, correct?
10	BY MR. ZELLERS:	10	MS. O'DELL: Object to the
11	Q. Well, we discussed a few	11	form.
12	minutes ago that if an agent is a Group 2B	12	A. They have in some subtypes.
	carcinogen, that is based on limited evidence	13	BY MR. ZELLERS:
13		1	0 771 1 1 1 1
13 14	in humans; is that right?	14	Q. There was an initial
		14 15	description with respect to the first Nurses'
14	in humans; is that right?	1	•
14 15	in humans; is that right? A. That's correct.	15	description with respect to the first Nurses'
14 15 16	in humans; is that right?  A. That's correct.  Q. All right. Your opinions on	15 16	description with respect to the first Nurses' study that was not supported in the update of
14 15 16 17	in humans; is that right?  A. That's correct. Q. All right. Your opinions on strength of association, do they apply equally to all forms of ovarian cancer?	15 16 17	description with respect to the first Nurses' study that was not supported in the update of that study; is that correct?
14 15 16 17 18	in humans; is that right?  A. That's correct. Q. All right. Your opinions on strength of association, do they apply equally to all forms of ovarian cancer?  A. No, they don't. These apply to	15 16 17 18	description with respect to the first Nurses' study that was not supported in the update of that study; is that correct?  A. The Nurses' Health Study? Q. Yes.
14 15 16 17 18 19	in humans; is that right?  A. That's correct. Q. All right. Your opinions on strength of association, do they apply equally to all forms of ovarian cancer?  A. No, they don't. These apply to the epithelial ovarian cancer spectrum.	15 16 17 18 19	description with respect to the first Nurses' study that was not supported in the update of that study; is that correct?  A. The Nurses' Health Study? Q. Yes.
14 15 16 17 18 19 20	in humans; is that right?  A. That's correct.  Q. All right. Your opinions on strength of association, do they apply equally to all forms of ovarian cancer?  A. No, they don't. These apply to the epithelial ovarian cancer spectrum.  Q. Your opinions in terms of there	15 16 17 18 19 20	description with respect to the first Nurses' study that was not supported in the update of that study; is that correct?  A. The Nurses' Health Study? Q. Yes. A. Yes, that's correct. Q. Let's look at a different
14 15 16 17 18 19 20 21	in humans; is that right?  A. That's correct. Q. All right. Your opinions on strength of association, do they apply equally to all forms of ovarian cancer? A. No, they don't. These apply to the epithelial ovarian cancer spectrum. Q. Your opinions in terms of there being a well, let me withdraw that.	15 16 17 18 19 20 21	description with respect to the first Nurses' study that was not supported in the update of that study; is that correct?  A. The Nurses' Health Study? Q. Yes. A. Yes, that's correct. Q. Let's look at a different criteria, consistency. The literature does
14 15 16 17 18 19 20 21	in humans; is that right?  A. That's correct.  Q. All right. Your opinions on strength of association, do they apply equally to all forms of ovarian cancer?  A. No, they don't. These apply to the epithelial ovarian cancer spectrum.  Q. Your opinions in terms of there	15 16 17 18 19 20 21 22	description with respect to the first Nurses' study that was not supported in the update of that study; is that correct?  A. The Nurses' Health Study? Q. Yes. A. Yes, that's correct. Q. Let's look at a different

	Page 238		Page 240
1	MS. O'DELL: Object to the	1	ill patients in the community to healthy
2	form.	2	people in the community, correct?
3	A. I believe that, in fact,	3	A. In some cases that might be
4	research shows does show a consistent	4	correct, but I'm not sure that's any in
5	pattern.	5	any sort of world an advantage.
6	BY MR. ZELLERS:	6	Q. Well, shouldn't there be
7	Q. The cohort studies do not show	7	consistency if the Bradford Hill criteria is
8	an association between talc use and ovarian	8	to be well, strike that.
9	cancer as we just discussed, correct?	9	In applying the Bradford Hill
10	A. The basic cohort studies that	10	criteria of consistency, there should be
11	look at all of the subjects and all of the	11	consistency across different types of
12	cancers together typically do not rise to the	12	studies, cohort studies, hospital-based
13	level of significance.	13	case-control studies, and population-based
14	Q. The hospital-based case-control	14	case-control studies, correct?
15	studies collectively do not show an	15	MS. O'DELL: Object to the
16	association between talc use and ovarian	16	form.
17	cancer, correct?	17	A. That's correct.
18	A. I sort of discount the	18	BY MR. ZELLERS:
19	distinction between the hospital-based	19	Q. Isn't the absence of an
20	studies and the community-based studies. I'm	20	association in the cohort studies especially
21	not sure whether there are valid reasons to	21	significant in that the study design for the
22 23	consider those differently. Q. We've discussed earlier that	22	cohort studies reduces the likelihood of
23		23	recall bias?
24	you are not an epidemiologist; is that right?	24	A. There are many forms of bias
	Page 239		
	Page 239		Page 241
1	MS. O'DELL: Object to the	1	Page 241 that study designers need to consider in the
1 2		1 2	
	MS. O'DELL: Object to the	l	that study designers need to consider in the
2 3 4	MS. O'DELL: Object to the form, misstates his testimony.  A. I don't think I necessarily agreed to that characterization because I	2 3 4	that study designers need to consider in the process of designing a study, and there are even more types of bias that are discovered after a study has begun.
2 3 4 5	MS. O'DELL: Object to the form, misstates his testimony. A. I don't think I necessarily agreed to that characterization because I deal a lot with epidemiologic work. I'm a	2	that study designers need to consider in the process of designing a study, and there are even more types of bias that are discovered after a study has begun.  You can fault case-control
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	Page 242		Page 244
1	explains the difference between the cohort	1	paragraph. Reading from the second full
2	studies and the retrospective case-control	2	paragraph, the authors discuss the fact that
3	studies?	3	the association between genital talc use and
4	MS. O'DELL: Object to form,	4	risk of ovarian cancer is present in
5	asked and answered.	5	case-control but not in cohort studies, can
6	A. I don't believe that that is	6	be attributed to bias in the former type of
7	the case.	7	studies; is that right?
8	BY MR. ZELLERS:	8	MS. O'DELL: Object to the
9	Q. Is it possible?	9	form.
10	MS. O'DELL: Objection.	10	A. That's what it says.
11	A. Theoretically it would be	11	BY MR. ZELLERS:
12	possible.	12	Q. Then continuing down:
13	BY MR. ZELLERS:	13	Information bias from retrospective
14	Q. Are you familiar with the	14	self-report of talc use is a possible
15	Berge Berge 2017 study?	15	explanation for the association detected in
16	A. Yes.	16	case-control studies.
17	Q. Is that a study that you cite	17	Is that right?
18	and reviewed and rely on?	18	A. That's what it says.
19	A. It was a meta-analysis.	19	Q. What was your methodology for
20	Q. Is that a meta-analysis that	20	discounting the effect of recall bias in the
21	you cite, review and have relied upon?	21	population-based case-control studies?
22	A. Yes.	22	A. The fact that several authors
23	Q. Take a look, if you will, at	23	discussed the possibility of recall bias and
24	Exhibit 22.	24	incorporated methodology for avoiding recall
24	Exhibit 22.	24	incorporated inclinedology for avoiding recair
	Page 243		Page 245
1	(Carson Deposition Exhibit 22	1	bias, for example, placing parallel questions
2	marked.)	2	that should be affected in the same way, and
3	THE WITNESS: Thank you.	l	
		3	
4	•	3 4	still showed a positive result for talc and ovarian cancer is one reason.
4 5	MS. O'DELL: Thank you.		still showed a positive result for talc and
	MS. O'DELL: Thank you. BY MR. ZELLERS:	4	still showed a positive result for talc and ovarian cancer is one reason.  The other has to do with
5	MS. O'DELL: Thank you. BY MR. ZELLERS: Q. You're familiar with this	4 5	still showed a positive result for talc and ovarian cancer is one reason.  The other has to do with consistency of the results, and although
5 6	MS. O'DELL: Thank you. BY MR. ZELLERS: Q. You're familiar with this meta-analysis; is that right?	4 5 6	still showed a positive result for talc and ovarian cancer is one reason.  The other has to do with consistency of the results, and although you've stated that from these various
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5 6 7 8 9 10	MS. O'DELL: Thank you. BY MR. ZELLERS: Q. You're familiar with this meta-analysis; is that right? A. Yes. Q. The authors conclude that information bias from retrospective	4 5 6 7 8	still showed a positive result for talc and ovarian cancer is one reason.  The other has to do with consistency of the results, and although you've stated that from these various documents, including this quotation, that the case-control studies showed positive associations but the cohort studies did not,
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	Page 246		Page 248
1	concluded that 15 out of the 30 case-control	1	page.
2	studies reported a statistically significant	2	MS. O'DELL: Object to the
3	association between genital talc use and	3	form.
4	ovarian cancer, correct?	4	BY MR. ZELLERS:
5	A. That's correct, but you're	5	Q. Is that the conclusion of the
6	not you're not talking about the other 15.	6	authors?
7	Q. The hospital-based case-control	7	A. What I'm reading here is on
8	studies collectively do not show a	8	balance, the epidemiological evidence
9	statistically significant association between	9	suggests that the use of cosmetic talc in the
10	talc use and ovarian cancer, correct?	10	perineal area may be associated with ovarian
11	MS. O'DELL: Object to the	11	cancer risk. The mechanism of
12	form.	12	carcinogenicity may be related to
13	A. I don't know that that is the	13	inflammation.
14	case.	14	Q. Take a look at the paragraph on
15	BY MR. ZELLERS:	15	the right-hand side under Proposal to
16	Q. You don't know that it's not	16	Research Community. I'm looking at the
17	the case; you'd have to go back and relook at	17	second page of the Langseth article.
18	the studies, fair?	18	Are you there?
19	A. I'd have to look through here,	19	A. Yes, I am.
20	which I'm happy to do if you want me to, but	20	Q. The authors state: The current
21	I don't believe that that's the case.	21	body of experimental and epidemiological
22	Q. In fact, the author, you cite	22	evidence is insufficient to establish a
23	the Langseth paper, a 2008 paper, as	23	causal association between perineal use of
24	supportive of your position; is that right?	24	talc and ovarian cancer risk.
	Page 247		Page 249
1	Page 247 A. Yes.	1	
1 2	A. Yes.	1 2	Is that right?
	A. Yes. Q. I'll mark that		
2	A. Yes. Q. I'll mark that Deposition Exhibit 23.	2	Is that right? MS. O'DELL: Object to the
2 3	A. Yes. Q. I'll mark that Deposition Exhibit 23.	2	Is that right? MS. O'DELL: Object to the form.
2 3 4	A. Yes. Q. I'll mark that Deposition Exhibit 23. A. I think it was 2004, was it not?	2 3 4	Is that right? MS. O'DELL: Object to the form. A. That's what it says.
2 3 4 5	A. Yes. Q. I'll mark that Deposition Exhibit 23. A. I think it was 2004, was it not?	2 3 4 5	Is that right? MS. O'DELL: Object to the form. A. That's what it says. BY MR. ZELLERS:
2 3 4 5 6	A. Yes. Q. I'll mark that Deposition Exhibit 23. A. I think it was 2004, was it not? Q. Well, I'm going to hand it to	2 3 4 5 6	Is that right? MS. O'DELL: Object to the form. A. That's what it says. BY MR. ZELLERS: Q. Experimental research is needed
2 3 4 5 6 7	A. Yes. Q. I'll mark that Deposition Exhibit 23. A. I think it was 2004, was it not? Q. Well, I'm going to hand it to you and we can look at it together.	2 3 4 5 6 7	Is that right? MS. O'DELL: Object to the form. A. That's what it says. BY MR. ZELLERS: Q. Experimental research is needed to better characterize deposition, retention
2 3 4 5 6 7 8	A. Yes. Q. I'll mark that Deposition Exhibit 23. A. I think it was 2004, was it not? Q. Well, I'm going to hand it to you and we can look at it together. (Carson Deposition Exhibit 23	2 3 4 5 6 7 8	Is that right? MS. O'DELL: Object to the form. A. That's what it says. BY MR. ZELLERS: Q. Experimental research is needed to better characterize deposition, retention and clearance of talc to evaluate the ovarian
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Page 250  1 So I — 2 Q. And then the conclusion is what 3 I read, that: The current body of 4 experimental and epidemiological evidence is 5 insufficient to establish a causal 6 association between perineal use of tale and 7 ovarian cancer risk. 8 Correct? 9 MS. O'DELL: Object to the 10 form. 11 A. That is what it says, but this 12 was accepted in 2007, which was now 12 years 13 ago. 14 BY MR. ZELLERS: 15 Q. Let me ask you about the cohort 15 studies. They involved more parater number 16 of form. 17 ownen than the case-controlled studies; is 18 that right? 19 MS. O'DELL: Object to the 10 form. 20 A. Well, they did not involve more 21 cases, but they involved more women because 22 in order to do a cohort study, you have to 23 start with a huge group of people and wait 24 start with a huge group of people and wait 25 page 251 26 for them to develop cancers, and then count 27 those cancers. 28 BY MR. ZELLERS: 4 Q. What was your methodology for 5 weighing the power of the cohort studies 4 Q. What was your methodology for 5 weighing the power of the cohort studies 6 versus the case-control studies; 7 A. The cohort studies, in wasn't 8 apparent in every research report exactly how 4 they had done their sample size calculations 10 and power determinations, but in many cases 11 the lack of arriving at conclusions was 12 simply due to an inability to detect an 12 effect in the cohort studies, and they 13 detected that there was not an effect. And 14 that's unfortunately a disadvantage of an 15 underpowered study.  Q. Is it your testimony that the 26 cohort studies are laring to genital tale use 27 and cohort studies and less the decir. Page 251 28 the lack of arriving at conclusions was 29 simply due to an inability to detect an 20 effect in the cohort studies, and the record at 3:19, beginning of Tape 4.  18 the studies and looked at their 29 pm.) 20 p. Dr. Carson, you are not a 21 statistician, correct? 21 A. That's correct 22 cancel studies and others have not? 23 A. It is my testimony that the 24 cohort studies are				
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Tend, that: The current body of experimental and epidemiological evidence is insufficient to establish a causal association between perineal use of tale and ovarian cancer rate. Spinning the roulette wheel?	1	So I	1	doesn't happen.
a experimental and epidemiological evidence is insufficient to establish a causal ovarian cancer risk.  Correct?  MS. O'DELL: Object to the form.  A. That is what it says, but this was accepted in 2007, which was now 12 years ago.  BY MR. ZELLERS:  Q. Let me ask you about the cohort studies. They involved a much greater number of women than the case-controlled studies; is that right?  MS. O'DELL: Object to the studies to detect a meaningful difference among the subjects, yes.  MS. O'DELLERS:  Q. That's your testimony as an expert in this case; is that right?  A. It is my testimony that cohort studies, They involved a much greater number of the expense associated with performing these studies.  MS. O'DELL: Object to the studies. They involved a much greater number of the case-controlled studies; is that right?  MS. O'DELL: Object to the studies. They involved a much greater number of the case-controlled studies; is that right?  MS. O'DELL: Object to the studies. They involved a much greater number of the case-controlled studies; is that right?  MS. O'DELL: Object to the studies and object in the cohort studies and the case-controlled studies; is that right?  A. Well, they did not involve more cases, but they involved more women because in order to do a cohort study, you have to 21 and the cohort studies are an effect. And they are an expert in this case; is that right?  A. Well, they did not involve more cases, but they involved more women because in order to do a cohort studies?  Page 251  for them to develop cancers, and then count those cancers.  BY MR. ZELLERS:  A. Lis my testimony that expert in this case; is that right?  A. Lis my testimony that the expert in this case; is that right?  A. Well, they did not involve more cases, but they involved more women because we need to change our tape.  Page 251  for them to develop cancers, and then count those cancers.  BY MR. ZELLERS:  A. The cohort studies?  A. The cohort studies are underpowered and the cohort studies and their conclusions, and their conclusions	2	Q. And then the conclusion is what	2	Q. Is it your testimony that the
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A. That is what it says, but this was accepted in 2007, which was now 12 years ago.  12	9	MS. O'DELL: Object to the	9	
12	10	form.	10	among the subjects, yes.
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they had done their sample size calculations and power determinations, but in many cases the lack of arriving at conclusions was the view View on the record at 3:19, beginning of Tape 4.  BY MR. ZELLERS: Q. Dr. Carson, you are not a statistician, correct? A. That's correct. Q. You are not a biostatistician; is that right? A. That's right. Q. Do you agree that some of the case-control studies have shown statistically significant findings and others have not? A. I do agree that.	8	apparent in every research report exactly how	8	the record at 3:06, end of Tape 3.
the lack of arriving at conclusions was  the villed Pieze A.  The VIDEOGRAPHER: We're on the  record at 3:19, beginning of Tape 4.  BY MR. ZELLERS:  Q. Dr. Carson, you are not a  statistician, correct?  A. That's correct.  Q. You are not a biostatistician;  is that right?  A. That's right.  Q. Do you agree that some of the  case-control studies have shown statistically  significant findings and others have not?  A. I do agree that.	9	they had done their sample size calculations	9	
the lack of arriving at conclusions was  simply due to an inability to detect an  effect in the cohort studies, not that they  detected that there was not an effect. And  that's unfortunately a disadvantage of an  underpowered study.  Q. Is it your testimony that the  cohort studies are underpowered?  A. I think by and large most  cohort studies are underpowered and  cohort studies are underpowered and  cohort studies are underpowered and  because power calculations are based on  chance. Investigators are sort of spinning  the roulette wheel and hoping that the number  the record at 3:19, beginning of Tape 4.  BY MR. ZELLERS:  Q. Dr. Carson, you are not a  statistician, correct?  A. That's correct.  Q. You are not a biostatistician;  is that right?  A. That's right.  Q. Do you agree that some of the  case-control studies have shown statistically  significant findings and others have not?  A. I do agree that.	10		10	•
simply due to an inability to detect an effect in the cohort studies, not that they detected that there was not an effect. And that's unfortunately a disadvantage of an underpowered study.  Q. Dr. Carson, you are not a statistician, correct?  A. That's correct.  Q. You are not a biostatistician; is that right?  A. I think by and large most cohort studies are underpowered and because power calculations are based on chance. Investigators are sort of spinning the roulette wheel and hoping that the number  12 record at 3:19, beginning of Tape 4.  BY MR. ZELLERS:  Q. Dr. Carson, you are not a statistician, correct?  A. That's correct.  Q. You are not a biostatistician; is that right?  A. That's right.  Q. Do you agree that some of the case-control studies have shown statistically significant findings and others have not?  A. I do agree that.	11		11	
effect in the cohort studies, not that they detected that there was not an effect. And that's unfortunately a disadvantage of an underpowered study.  Q. Dr. Carson, you are not a statistician, correct?  A. That's correct.  Q. You are not a biostatistician; is that right?  A. I think by and large most cohort studies are underpowered and cohort studies are underpowered and because power calculations are based on chance. Investigators are sort of spinning the roulette wheel and hoping that the number  13 BY MR. ZELLERS: Q. Dr. Carson, you are not a statistician, correct? A. That's correct. Q. You are not a biostatistician; is that right? A. That's right. Q. Do you agree that some of the case-control studies have shown statistically significant findings and others have not? A. I do agree that.	12		12	
detected that there was not an effect. And that's unfortunately a disadvantage of an underpowered study.  Q. Is it your testimony that the cohort studies are underpowered?  A. I think by and large most cohort studies are underpowered and cohort stud	13	* *	13	
that's unfortunately a disadvantage of an  15 statistician, correct?  16 underpowered study.  16 A. That's correct.  17 Q. Is it your testimony that the 18 cohort studies are underpowered?  19 A. I think by and large most 19 A. That's right.  20 cohort studies are underpowered and 21 because power calculations are based on 22 chance. Investigators are sort of spinning 23 the roulette wheel and hoping that the number 24 statistician, correct?  A. That's correct.  Q. You are not a biostatistician; is that right?  A. That's right.  Q. Do you agree that some of the case-control studies have shown statistically significant findings and others have not?  A. I do agree that.	14	*	14	
16 underpowered study.  17 Q. Is it your testimony that the 18 cohort studies are underpowered?  19 A. I think by and large most 20 cohort studies are underpowered and 21 because power calculations are based on 22 chance. Investigators are sort of spinning 23 the roulette wheel and hoping that the number 21 Large A. That's correct.  Q. You are not a biostatistician; is that right?  A. That's right.  Q. Do you agree that some of the case-control studies have shown statistically significant findings and others have not? A. I do agree that.	15			
Q. Is it your testimony that the cohort studies are underpowered?  18 cohort studies are underpowered?  19 A. I think by and large most 20 cohort studies are underpowered and 21 because power calculations are based on 21 case-control studies have shown statistically 22 chance. Investigators are sort of spinning 23 the roulette wheel and hoping that the number 24 Q. You are not a biostatistician; is that right?  Q. You are not a biostatistician; 20 Q. Do you agree that some of the 21 case-control studies have shown statistically 22 significant findings and others have not? 3 A. I do agree that.				
cohort studies are underpowered?  18 is that right?  19 A. I think by and large most 19 A. That's right.  20 cohort studies are underpowered and 21 because power calculations are based on 21 chance. Investigators are sort of spinning 22 chance. Investigators are sort of spinning 23 the roulette wheel and hoping that the number 24 is that right?  26 Q. Do you agree that some of the 27 case-control studies have shown statistically 28 significant findings and others have not? 29 A. I do agree that.	16			
A. I think by and large most  19 A. That's right.  20 Cohort studies are underpowered and 21 because power calculations are based on 22 chance. Investigators are sort of spinning 23 the roulette wheel and hoping that the number 21 A. That's right.  20 C. Do you agree that some of the 21 case-control studies have shown statistically 22 significant findings and others have not?  A. I do agree that.		· ·	T./	Q. I ou are not a diostatistician,
cohort studies are underpowered and  20 Q. Do you agree that some of the  because power calculations are based on  chance. Investigators are sort of spinning  the roulette wheel and hoping that the number  20 Q. Do you agree that some of the  case-control studies have shown statistically  significant findings and others have not?  A. I do agree that.	17	Q. Is it your testimony that the		
because power calculations are based on 21 case-control studies have shown statistically chance. Investigators are sort of spinning 22 significant findings and others have not? the roulette wheel and hoping that the number 23 A. I do agree that.	17 18	Q. Is it your testimony that the cohort studies are underpowered?	18	is that right?
chance. Investigators are sort of spinning 22 significant findings and others have not? the roulette wheel and hoping that the number 23 A. I do agree that.	17 18 19	<ul><li>Q. Is it your testimony that the cohort studies are underpowered?</li><li>A. I think by and large most</li></ul>	18 19	is that right?  A. That's right.
the roulette wheel and hoping that the number 23 A. I do agree that.	17 18 19 20	Q. Is it your testimony that the cohort studies are underpowered?  A. I think by and large most cohort studies are underpowered and	18 19 20	is that right?  A. That's right.  Q. Do you agree that some of the
i i i i i i i i i i i i i i i i i i i	17 18 19 20 21	Q. Is it your testimony that the cohort studies are underpowered?  A. I think by and large most cohort studies are underpowered and because power calculations are based on	18 19 20 21	is that right?  A. That's right.  Q. Do you agree that some of the case-control studies have shown statistically
2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2	17 18 19 20 21 22	Q. Is it your testimony that the cohort studies are underpowered?  A. I think by and large most cohort studies are underpowered and because power calculations are based on chance. Investigators are sort of spinning	18 19 20 21 22	is that right?  A. That's right. Q. Do you agree that some of the case-control studies have shown statistically significant findings and others have not?
	17 18 19 20 21 22 23	Q. Is it your testimony that the cohort studies are underpowered?  A. I think by and large most cohort studies are underpowered and because power calculations are based on chance. Investigators are sort of spinning the roulette wheel and hoping that the number	18 19 20 21 22 23	is that right?  A. That's right.  Q. Do you agree that some of the case-control studies have shown statistically significant findings and others have not?  A. I do agree that.

	Page 254		Page 256
1	statistically significant association, it	1	front of you?
2	could mean that no risk exists, as we've	2	A. I do.
3	discussed; is that right?	3	I would also add that the
4	A. That's correct.	4	Penninkilampi meta-analysis also found a
5	Q. What methodology did you use to	5	dose-response.
6	weigh the lack of statistical significance	6	Q. Do you mention Penninkilampi at
7	across studies?	7	all in your report?
8	MS. O'DELL: Object to the	8	A. It's cited.
9	form.	9	Q. In the body of your report?
10	A. Across all of the case-control	10	A. I think it's in there
11	studies?	11	somewhere.
12	BY MR. ZELLERS:	12	Q. You believe it is; is that
13	Q. Yes.	13	right?
14	A. I simply treated them as	14	A. I do.
15	isolated research designs that were done on	15	Q. Well, I'll ask you a couple of
16	different populations in different places	16	questions about it then.
17	with different considerations. They were not	17	Before I do, let's talk a
18	necessarily comparable, like apples to apples	18	little bit more about your report. So go to
19	or oranges to oranges; they were very	19	page 7. You state at the very top of that
20	different studies in most cases, and so I	20	page that it has been difficult to estimate
21	felt it was important to allow their findings	21	dose in order to evaluate the dose-response
22	to stand on their own.	22	-
23		23	relationship for ovarian cancer; is that
24	Q. I want to talk to you about	24	right? A. That's correct.
2 <b>4</b>	dose-response. That's another of the	24	A. That's correct.
	Page 255		Page 257
1	Bradford Hill criteria; is that right?	1	Q. You state that it also has been
2	A. That's correct.	2	difficult to exactly estimate the quantity of
3	Q. Which studies show a	3	talcum powder administration during personal
4	dose-response, talc exposure and ovarian	4	hygiene activities; is that right?
5	cancer?	5	A. That's correct.
6	A. Let me see here. I'm looking	6	Q. Let's look at a couple of the
7	at my notes. The Harlow study from 1992	7	studies that you believe do, in fact, show a
8	showed a dose-response, and the Cramer 2016	8	dose-response. The Penninkilampi, that's a
9	study showed a dose trend with strong odds	9	meta-analysis, 2018; is that right?
10	•		, , , , ,
	ratios for premenopausal women and hormone	I T0	A. That's correct.
	ratios for premenopausal women and hormone therapy-treated women with greater than	10 11	<ul><li>A. That's correct.</li><li>O. That study does not consider or</li></ul>
11	therapy-treated women with greater than	11	Q. That study does not consider or
11 12	therapy-treated women with greater than 24 years of exposure.	11 12	Q. That study does not consider or include the Gertic 2010 cohort study; is that
11 12 13	therapy-treated women with greater than 24 years of exposure. The Schildkraut study, also a	11 12 13	Q. That study does not consider or include the Gertic 2010 cohort study; is that right?
11 12 13 14	therapy-treated women with greater than 24 years of exposure. The Schildkraut study, also a case-controlled study of 2016, showed a	11 12 13 14	Q. That study does not consider or include the Gertic 2010 cohort study; is that right?  A. I I'd have to look at the
11 12 13 14 15	therapy-treated women with greater than 24 years of exposure.  The Schildkraut study, also a case-controlled study of 2016, showed a dose-response.	11 12 13 14 15	Q. That study does not consider or include the Gertic 2010 cohort study; is that right?  A. I I'd have to look at the table, but yes, that one may be left out.
11 12 13 14 15 16	therapy-treated women with greater than 24 years of exposure.  The Schildkraut study, also a case-controlled study of 2016, showed a dose-response.  Q. There are a number of studies	11 12 13 14 15 16	Q. That study does not consider or include the Gertic 2010 cohort study; is that right?  A. I I'd have to look at the table, but yes, that one may be left out.  Q. Well, that's a significant
11 12 13 14 15 16 17	therapy-treated women with greater than 24 years of exposure.  The Schildkraut study, also a case-controlled study of 2016, showed a dose-response.  Q. There are a number of studies that did not show a dose-response; is that	11 12 13 14 15 16 17	Q. That study does not consider or include the Gertic 2010 cohort study; is that right?  A. I I'd have to look at the table, but yes, that one may be left out.  Q. Well, that's a significant study to leave out of an analysis, isn't it?
11 12 13 14 15 16 17	therapy-treated women with greater than 24 years of exposure.  The Schildkraut study, also a case-controlled study of 2016, showed a dose-response.  Q. There are a number of studies that did not show a dose-response; is that right?	11 12 13 14 15 16 17	Q. That study does not consider or include the Gertic 2010 cohort study; is that right?  A. I I'd have to look at the table, but yes, that one may be left out.  Q. Well, that's a significant study to leave out of an analysis, isn't it?  MS. O'DELL: Object to the
11 12 13 14 15 16 17 18	therapy-treated women with greater than 24 years of exposure.  The Schildkraut study, also a case-controlled study of 2016, showed a dose-response.  Q. There are a number of studies that did not show a dose-response; is that right?  A. It's correct. They did not	11 12 13 14 15 16 17 18	Q. That study does not consider or include the Gertic 2010 cohort study; is that right?  A. I I'd have to look at the table, but yes, that one may be left out.  Q. Well, that's a significant study to leave out of an analysis, isn't it?  MS. O'DELL: Object to the form.
11 12 13 14 15 16 17 18 19 20	therapy-treated women with greater than 24 years of exposure.  The Schildkraut study, also a case-controlled study of 2016, showed a dose-response.  Q. There are a number of studies that did not show a dose-response; is that right?  A. It's correct. They did not necessarily show there was not a	11 12 13 14 15 16 17 18 19 20	Q. That study does not consider or include the Gertic 2010 cohort study; is that right?  A. I I'd have to look at the table, but yes, that one may be left out.  Q. Well, that's a significant study to leave out of an analysis, isn't it?  MS. O'DELL: Object to the form.  THE WITNESS: I'm getting
11 12 13 14 15 16 17 18 19 20 21	therapy-treated women with greater than 24 years of exposure.  The Schildkraut study, also a case-controlled study of 2016, showed a dose-response.  Q. There are a number of studies that did not show a dose-response; is that right?  A. It's correct. They did not necessarily show there was not a dose-response. They just, as I was	11 12 13 14 15 16 17 18 19 20 21	Q. That study does not consider or include the Gertic 2010 cohort study; is that right?  A. I I'd have to look at the table, but yes, that one may be left out.  Q. Well, that's a significant study to leave out of an analysis, isn't it?  MS. O'DELL: Object to the form.  THE WITNESS: I'm getting there.
11 12 13 14 15 16 17 18 19 20 21 22	therapy-treated women with greater than 24 years of exposure.  The Schildkraut study, also a case-controlled study of 2016, showed a dose-response.  Q. There are a number of studies that did not show a dose-response; is that right?  A. It's correct. They did not necessarily show there was not a dose-response. They just, as I was mentioning before, were unable to detect a	11 12 13 14 15 16 17 18 19 20 21 22	Q. That study does not consider or include the Gertic 2010 cohort study; is that right?  A. I I'd have to look at the table, but yes, that one may be left out.  Q. Well, that's a significant study to leave out of an analysis, isn't it?  MS. O'DELL: Object to the form.  THE WITNESS: I'm getting there.  (Document review.)
11 12 13 14 15 16 17 18 19 20 21	therapy-treated women with greater than 24 years of exposure.  The Schildkraut study, also a case-controlled study of 2016, showed a dose-response.  Q. There are a number of studies that did not show a dose-response; is that right?  A. It's correct. They did not necessarily show there was not a dose-response. They just, as I was	11 12 13 14 15 16 17 18 19 20 21	Q. That study does not consider or include the Gertic 2010 cohort study; is that right?  A. I I'd have to look at the table, but yes, that one may be left out.  Q. Well, that's a significant study to leave out of an analysis, isn't it?  MS. O'DELL: Object to the form.  THE WITNESS: I'm getting there.

	Page 258		Page 260
1	MS. O'DELL: You need help?	1	Q. This is my highlighted copy, so
2	THE WITNESS: Okay.	2	I'm sure it wasn't yours.
3	BY MR. ZELLERS:	3	A. I'm sorry.
4	Q. And I misspoke. I meant to	4	Q. That's all right. We'll
5	refer to Gates, the updated Nurses' study.	5	take your time.
6	So Gates 2010.	6	A. Here we are.
7	A. Yes, it appears that Gates is	7	O. Got it, Exhibit 20?
8	not included in the in the spectrum of	8	A. I think so.
9	studies considering; the Gertic study does	9	Q. Do you have the Cramer study in
10	appear.	10	front of you?
11	Q. Gates 2010 is an important	11	A. I do.
12	cohort study in this area, would you agree?	12	Q. It's a retrospective
13	MS. O'DELL: Object to the	13	case-control study published in 2016; is that
14	form.	14	right?
15		15	A. That's correct.
	A. It's important, but I think it	16	
16	may be considered one of the ones that		•
17	suffered from power issues. It wasn't able	17	results on page 337, Table 1.
18	to determine a relative risk in the	18	Do you see that?
19	population that it assessed.	19	A. Yes.
20	BY MR. ZELLERS:	20	Q. This table shows the risk of
21	Q. There are a number of the	21	ovarian cancer for women who use talc, talcum
22	case-control studies that did not determine a	22	powder, daily; is that right?
23	relative risk, at least of statistical	23	MS. O'DELL: Object to the
24	significance, correct?	24	form.
	Page 259		Page 261
1		1	Page 261 A. It does.
1 2	A. Well, they determined odds	1 2	
2	A. Well, they determined odds ratios, which is the equivalent of relative		A. It does. BY MR. ZELLERS:
2 3	A. Well, they determined odds ratios, which is the equivalent of relative risk for a case-control study.	2	A. It does. BY MR. ZELLERS: Q. And it's four different periods
2 3 4	A. Well, they determined odds ratios, which is the equivalent of relative risk for a case-control study.  Q. And in a number of those	2	A. It does. BY MR. ZELLERS: Q. And it's four different periods of time; one year, one to five years, five to
2 3 4 5	A. Well, they determined odds ratios, which is the equivalent of relative risk for a case-control study.  Q. And in a number of those case-control studies, at least 15 out of the	2 3 4	A. It does. BY MR. ZELLERS: Q. And it's four different periods of time; one year, one to five years, five to 20 years and more than 20 years; is that
2 3 4 5 6	A. Well, they determined odds ratios, which is the equivalent of relative risk for a case-control study.  Q. And in a number of those case-control studies, at least 15 out of the 30 relative risk was not or strike that	2 3 4 5	A. It does. BY MR. ZELLERS: Q. And it's four different periods of time; one year, one to five years, five to 20 years and more than 20 years; is that right?
2 3 4 5 6 7	A. Well, they determined odds ratios, which is the equivalent of relative risk for a case-control study.  Q. And in a number of those case-control studies, at least 15 out of the 30 relative risk was not or strike that statistical significance was not achieved in	2 3 4 5 6	A. It does. BY MR. ZELLERS: Q. And it's four different periods of time; one year, one to five years, five to 20 years and more than 20 years; is that right? A. That's correct.
2 3 4 5 6 7 8	A. Well, they determined odds ratios, which is the equivalent of relative risk for a case-control study.  Q. And in a number of those case-control studies, at least 15 out of the 30 relative risk was not or strike that statistical significance was not achieved in the study; is that right?	2 3 4 5 6 7 8	A. It does. BY MR. ZELLERS: Q. And it's four different periods of time; one year, one to five years, five to 20 years and more than 20 years; is that right? A. That's correct. Q. There was only statistical
2 3 4 5 6 7 8 9	A. Well, they determined odds ratios, which is the equivalent of relative risk for a case-control study.  Q. And in a number of those case-control studies, at least 15 out of the 30 relative risk was not or strike that statistical significance was not achieved in the study; is that right?  MS. O'DELL: Object to the	2 3 4 5 6 7 8 9	A. It does. BY MR. ZELLERS: Q. And it's four different periods of time; one year, one to five years, five to 20 years and more than 20 years; is that right? A. That's correct. Q. There was only statistical significance found for the time period of one
2 3 4 5 6 7 8 9	A. Well, they determined odds ratios, which is the equivalent of relative risk for a case-control study.  Q. And in a number of those case-control studies, at least 15 out of the 30 relative risk was not or strike that statistical significance was not achieved in the study; is that right?  MS. O'DELL: Object to the form.	2 3 4 5 6 7 8 9	A. It does. BY MR. ZELLERS: Q. And it's four different periods of time; one year, one to five years, five to 20 years and more than 20 years; is that right? A. That's correct. Q. There was only statistical significance found for the time period of one to five years of use and more than 20 years
2 3 4 5 6 7 8 9 10 11	A. Well, they determined odds ratios, which is the equivalent of relative risk for a case-control study.  Q. And in a number of those case-control studies, at least 15 out of the 30 relative risk was not or strike that statistical significance was not achieved in the study; is that right?  MS. O'DELL: Object to the form.  A. That's correct.	2 3 4 5 6 7 8 9 10	A. It does. BY MR. ZELLERS: Q. And it's four different periods of time; one year, one to five years, five to 20 years and more than 20 years; is that right? A. That's correct. Q. There was only statistical significance found for the time period of one to five years of use and more than 20 years of use; is that right?
2 3 4 5 6 7 8 9 10 11	A. Well, they determined odds ratios, which is the equivalent of relative risk for a case-control study.  Q. And in a number of those case-control studies, at least 15 out of the 30 relative risk was not or strike that statistical significance was not achieved in the study; is that right?  MS. O'DELL: Object to the form.  A. That's correct.  BY MR. ZELLERS:	2 3 4 5 6 7 8 9 10 11	A. It does. BY MR. ZELLERS: Q. And it's four different periods of time; one year, one to five years, five to 20 years and more than 20 years; is that right? A. That's correct. Q. There was only statistical significance found for the time period of one to five years of use and more than 20 years of use; is that right? A. For the first group, the for
2 3 4 5 6 7 8 9 10 11 12 13	A. Well, they determined odds ratios, which is the equivalent of relative risk for a case-control study.  Q. And in a number of those case-control studies, at least 15 out of the 30 relative risk was not or strike that statistical significance was not achieved in the study; is that right?  MS. O'DELL: Object to the form.  A. That's correct.  BY MR. ZELLERS:  Q. Let's look at the Cramer paper.	2 3 4 5 6 7 8 9 10 11 12 13	A. It does. BY MR. ZELLERS: Q. And it's four different periods of time; one year, one to five years, five to 20 years and more than 20 years; is that right? A. That's correct. Q. There was only statistical significance found for the time period of one to five years of use and more than 20 years of use; is that right? A. For the first group, the for those who reported months year of use
2 3 4 5 6 7 8 9 10 11 12 13 14	A. Well, they determined odds ratios, which is the equivalent of relative risk for a case-control study.  Q. And in a number of those case-control studies, at least 15 out of the 30 relative risk was not or strike that statistical significance was not achieved in the study; is that right?  MS. O'DELL: Object to the form.  A. That's correct.  BY MR. ZELLERS:  Q. Let's look at the Cramer paper.  We've talked about this earlier.	2 3 4 5 6 7 8 9 10 11 12 13 14	A. It does. BY MR. ZELLERS: Q. And it's four different periods of time; one year, one to five years, five to 20 years and more than 20 years; is that right? A. That's correct. Q. There was only statistical significance found for the time period of one to five years of use and more than 20 years of use; is that right? A. For the first group, the for those who reported months year of use months per year of use.
2 3 4 5 6 7 8 9 10 11 12 13 14 15	A. Well, they determined odds ratios, which is the equivalent of relative risk for a case-control study.  Q. And in a number of those case-control studies, at least 15 out of the 30 relative risk was not or strike that statistical significance was not achieved in the study; is that right?  MS. O'DELL: Object to the form.  A. That's correct.  BY MR. ZELLERS:  Q. Let's look at the Cramer paper.  We've talked about this earlier.  A. Which one, the 2016?	2 3 4 5 6 7 8 9 10 11 12 13 14 15	A. It does. BY MR. ZELLERS: Q. And it's four different periods of time; one year, one to five years, five to 20 years and more than 20 years; is that right? A. That's correct. Q. There was only statistical significance found for the time period of one to five years of use and more than 20 years of use; is that right? A. For the first group, the for those who reported months year of use months per year of use. Q. Well, for the first group,
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. Well, they determined odds ratios, which is the equivalent of relative risk for a case-control study.  Q. And in a number of those case-control studies, at least 15 out of the 30 relative risk was not or strike that statistical significance was not achieved in the study; is that right?  MS. O'DELL: Object to the form.  A. That's correct.  BY MR. ZELLERS:  Q. Let's look at the Cramer paper.  We've talked about this earlier.  A. Which one, the 2016?  Q. Exhibit 20, yes, 2016.  A. Okay.  Q. This is another study that you cite as being supportive of your dose-response opinion; is that right?  A. Yes.  Q. Tell me when you have it.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. It does. BY MR. ZELLERS: Q. And it's four different periods of time; one year, one to five years, five to 20 years and more than 20 years; is that right? A. That's correct. Q. There was only statistical significance found for the time period of one to five years of use and more than 20 years of use; is that right? A. For the first group, the for those who reported months year of use months per year of use. Q. Well, for the first group, which was equivalent to one year of daily use, there was no statistical significance; is that right? MS. O'DELL: Object to the form. A. That well, the there was a positive odds ratio with a nonsignificant
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. Well, they determined odds ratios, which is the equivalent of relative risk for a case-control study.  Q. And in a number of those case-control studies, at least 15 out of the 30 relative risk was not or strike that statistical significance was not achieved in the study; is that right?  MS. O'DELL: Object to the form.  A. That's correct.  BY MR. ZELLERS:  Q. Let's look at the Cramer paper.  We've talked about this earlier.  A. Which one, the 2016?  Q. Exhibit 20, yes, 2016.  A. Okay.  Q. This is another study that you cite as being supportive of your dose-response opinion; is that right?  A. Yes.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. It does. BY MR. ZELLERS: Q. And it's four different periods of time; one year, one to five years, five to 20 years and more than 20 years; is that right? A. That's correct. Q. There was only statistical significance found for the time period of one to five years of use and more than 20 years of use; is that right? A. For the first group, the for those who reported months year of use months per year of use. Q. Well, for the first group, which was equivalent to one year of daily use, there was no statistical significance; is that right? MS. O'DELL: Object to the form. A. That well, the there was

	Page 262		Page 264
1	BY MR. ZELLERS:	1	dirty, and it doesn't always work out quite
2	Q. Meaning that if you look at	2	that cleanly.
3	this study, that it is certainly possible	3	BY MR. ZELLERS:
4	that because there is not statistical	4	Q. All right. Do you well, let
5	significance, there could be a finding of no	5	me withdraw that.
6	risk, correct, no increased risk?	6	Confounding. You considered
7	A. That's a possibility.	7	and talk about confounding as another one of
8	Q. Then if we go to the next	8	the Bradford Hill criteria; is that right?
9	period, we do show a dose-response for talcum	9	MS. O'DELL: Object to the
10	powder use in the year years one to five;	10	form.
11	is that right?	11	A. Confounding, by that you mean
12	A. Well, one to five years of	12	specificity?
13	daily use, yes.	13	BY MR. ZELLERS:
14	Q. But then when we look at five	14	Q. Well, I thought your I
15		15	
16	to 20 years of daily use, there is not a	16	thought you said in your methodology that you
17	statistically significant association; is	17	applied the Bradford Hill criteria.
	that right?		A. That's correct.
18	A. That's correct.	18	Q. Is confound strike that.
19	Q. But then when we go to greater	19	Is confounding an issue in
20	than 20 years, we do find a statistical	20	interpreting epidemiologic studies?
21	association; is that right?	21	A. Yes.
22	A. That's correct.	22	Q. Do you agree that there is
23	Q. If, in fact, there was a true	23	confounding in these studies?
24	dose-response relationship, you would expect	24	A. I'm sure there's confounding in
	Page 263		Page 265
1	to see that dose-response relationship in	1	these studies.
2	each of these groups; is that right?	2	Q. You're familiar with that term,
3	MS. O'DELL: Object to the	3	right?
4	form.	4	A. Yes.
5	A. It's more like we see in the	5	Q. That's where the presence of
6	group directly below that, where you start	6	another association confuses the relationship
7	out with an odds ratio which is not	7	between the exposure and the disease being
8	significant but positive, and then reach a	8	studied; is that right?
9	significant odds ratio at one to five years	9	A. That's correct.
10	of daily use and a higher amount of	10	Q. For example, if you're studying
11	significance with five to 20 years of daily	11	the association between coffee and pancreatic
12	use, and still a significant odds ratio,	12	cancer, you need to be mindful of whether
13	which is about the same level, at greater	13	cigarette smoking is more common in coffee
14	than 20 years of daily use.	14	drinkers than the rest of the population,
15	BY MR. ZELLERS:	15	fair?
16	Q. Is that a yes to my question,	16	A. Yes.
17	that if you do have a true dose-response	17	Q. Coffee or strike that.
18	relationship, you would expect to see that	18	Cigarette smoking could be a
18 19	dose-response continue throughout each of the	19	confounder in that situation?
20	periods?	20	
	÷	1	
21 22	MS. O'DELL: Object to the	21	Q. Because if more coffee drinkers
44	form.	22	are smokers than non-coffee drinkers, an
	Λ Wall it recorded to the if		
23 24	A. Well, it would be nice if you did that, but epidemiologic data is very	23 24	association between coffee drinking and pancreatic cancer might be due to the

	Dama 266		Page 260
	Page 266		Page 268
1	smoking, not the coffee drinking; fair?	1	not controlled for in any of the talc/ovarian
2	A. That would be a good	2	cancer studies, were they?
3	description of confounding.	3	A. Not that I'm aware of.
4	Q. Confounding can distort results	4	Q. Are you aware that studies that
5	in epidemiological studies; is that right?	5	show a relationship between talc and ovarian
6	A. It can.	6	cancer did not account for confounders?
7	Q. Do you agree that residual	7	A. I think it's possible that many
8	confounding is possible in every	8	of those studies did not account for all
9	observational study?	9	potential confounders, but they made attempts
10	A. Yes, I think there's some form	10	to.
11	of confounding that's present in every	11	Q. For example, Terry 2013, we
12	observational study.	12	talked about that earlier; is that right?
13	Q. It's possible that unmeasured	13	A. Yes.
14	confounders may be present in every	14	Q. Terry 2013, that meta-analysis
15	observational study; is that right?	15	did not adjust for hormone replacement
16	A. That's correct. Not just	16	therapy usage, correct?
17	unmeasured confounders, but unrecognized	17	A. Yes.
18	confounders.	18	Q. If hormone replacement therapy
19	Q. It's impossible to say that all	19	is a risk factor for ovarian cancer, then the
20	known and unknown confounding factors have	20	Terry 2013 meta-analysis did not account for
21	been controlled for in any given study; is	21	that potential confounding factor, correct?
22	that right?	22	MS. O'DELL: Object to the
23	A. I also agree with that.	23	form.
24	Q. Many new factors possibly	24	A. Correct.
	Q. Wiany new factors possiony	2 1	A. Concet.
	Page 267		Page 269
1	involved in ovarian cancer risk are just	1	BY MR. ZELLERS:
2	being published in the literature, correct?		
	being published in the interactive, correct.	2	Q. You cannot say whether the odds
3	MS. O'DELL: Object to the	2 3	Q. You cannot say whether the odds ratio of the Terry 2013 study would have been
3 4			
	MS. O'DELL: Object to the	3	ratio of the Terry 2013 study would have been lower if the authors had adjusted for hormone
4	MS. O'DELL: Object to the form.	3 4	ratio of the Terry 2013 study would have been
4 5	MS. O'DELL: Object to the form. A. I believe that is true. BY MR. ZELLERS:	3 4 5	ratio of the Terry 2013 study would have been lower if the authors had adjusted for hormone replacement therapy usage, correct?
4 5 6	MS. O'DELL: Object to the form.  A. I believe that is true. BY MR. ZELLERS: Q. For example, history of	3 4 5 6	ratio of the Terry 2013 study would have been lower if the authors had adjusted for hormone replacement therapy usage, correct?  A. I cannot say that. Yes.
4 5 6 7	MS. O'DELL: Object to the form.  A. I believe that is true.  BY MR. ZELLERS:  Q. For example, history of chlamydia infection, have you read about that	3 4 5 6 7	ratio of the Terry 2013 study would have been lower if the authors had adjusted for hormone replacement therapy usage, correct?  A. I cannot say that. Yes.  Q. Recall bias. You're familiar
4 5 6 7 8	MS. O'DELL: Object to the form.  A. I believe that is true. BY MR. ZELLERS: Q. For example, history of	3 4 5 6 7 8	ratio of the Terry 2013 study would have been lower if the authors had adjusted for hormone replacement therapy usage, correct?  A. I cannot say that. Yes. Q. Recall bias. You're familiar with recall bias? A. I am.
4 5 6 7 8 9	MS. O'DELL: Object to the form.  A. I believe that is true. BY MR. ZELLERS: Q. For example, history of chlamydia infection, have you read about that possibly being involved in ovarian cancer	3 4 5 6 7 8	ratio of the Terry 2013 study would have been lower if the authors had adjusted for hormone replacement therapy usage, correct?  A. I cannot say that. Yes. Q. Recall bias. You're familiar with recall bias? A. I am. Q. That is also a concern in every
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	Page 270		Page 272
1	A. That's correct.	1	publicity from lawsuits might influence the
2	BY MR. ZELLERS:	2	participants' recall of prior body powder
3	Q. The effects of recall bias can	3	use; is that right?
4	be very real; is that right?	4	A. This was a recent study, so
5	MS. O'DELL: Object to the	5	that was more likely.
6	form.	6	Q. If you look on page 2,
7	A. I'm not sure what you mean by	7	right-hand side, last paragraph that starts
8	very real.	8	"Covariates include."
9	BY MR. ZELLERS:	9	Do you see that?
10	Q. Well, let's look at one of the	10	A. Yes.
11	studies that you cite. You cited the	11	Q. And I'm reading about
12	Schildkraut study in your report and you	12	two-thirds of the way down: Two class action
13	referred to it a bit earlier as supporting	13	lawsuits were filed in 2014 concerning
14	dose-response; is that right?	14	possible carcinogenic effects of body powder
15	A. Yes.	15	which may have influenced recall of use;
16	Q. That's a study by Schildkraut	16	therefore, year of interview 2014 or later,
17	and others titled Association Between Body	17	yes/no, was concluded as a covariate in the
18	Powder Use and Ovarian Cancer, the	18	logistic regression models.
19	African-American Cancer Epidemiologic or	19	Is that correct?
20	Epidemiology Study.	20	A. That's correct.
21	Is that right?	21	Q. So go to page 4, Table 2. This
22	A. Yes.	22	is the adjusted odds ratio for the
23	Q. I've got it here for you.	23	associations between mode, frequency and
24	A. Okay.	24	duration of body powder use in ovarian
	Page 271		Page 273
1	(Carson Deposition Exhibit 24	1	cancer; is that right?
2	marked.)	2	A. Yes.
3	BY MR. ZELLERS:	3	Q. The second column shows the
4	Q. Deposition Exhibit 24 is the	4	number of cases, and that would be women with
5	0-1-11-11		
-	Schildkraut study, 2016, correct?	5	ovarian cancer; is that right?
6	Schildkraut study, 2016, correct? (Pause.)	5 6	
			ovarian cancer; is that right?
6	(Pause.)	6	ovarian cancer; is that right?  A. That's correct.
6 7	(Pause.) BY MR. ZELLERS: Q. Did you say correct? A. I think I did. I'm sorry.	6 7	ovarian cancer; is that right?  A. That's correct.  Q. The third column shows the
6 7 8	(Pause.) BY MR. ZELLERS: Q. Did you say correct? A. I think I did. I'm sorry. Q. That's all right. I may have	6 7 8	ovarian cancer; is that right?  A. That's correct.  Q. The third column shows the controls; that's the women who do not have
6 7 8 9	(Pause.) BY MR. ZELLERS: Q. Did you say correct? A. I think I did. I'm sorry.	6 7 8 9	ovarian cancer; is that right?  A. That's correct.  Q. The third column shows the controls; that's the women who do not have ovarian cancer, correct?
6 7 8 9 10	(Pause.) BY MR. ZELLERS: Q. Did you say correct? A. I think I did. I'm sorry. Q. That's all right. I may have	6 7 8 9 10	ovarian cancer; is that right?  A. That's correct.  Q. The third column shows the controls; that's the women who do not have ovarian cancer, correct?  A. Yes.
6 7 8 9 10 11	(Pause.) BY MR. ZELLERS: Q. Did you say correct? A. I think I did. I'm sorry. Q. That's all right. I may have missed it.	6 7 8 9 10 11	ovarian cancer; is that right?  A. That's correct.  Q. The third column shows the controls; that's the women who do not have ovarian cancer, correct?  A. Yes.  Q. Looking at this data before
6 7 8 9 10 11 12 13	(Pause.) BY MR. ZELLERS: Q. Did you say correct? A. I think I did. I'm sorry. Q. That's all right. I may have missed it. Exhibit 24 is the Schildkraut 2016 study; is that right? A. Yes.	6 7 8 9 10 11 12	ovarian cancer; is that right?  A. That's correct.  Q. The third column shows the controls; that's the women who do not have ovarian cancer, correct?  A. Yes.  Q. Looking at this data before 2014, before the lawsuits, the percentage of controls, meaning women without ovarian cancer, said they used talc on their genitals
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	Page 274		Page 276
1	interviewed before 2014 that said they used	1	BY MR. ZELLERS:
2	talc on their genitals was 36.5%; is that	2	Q. In this study, lawsuit filings
3	right?	3	appears to have affected how many women with
4	A. That's correct.	4	ovarian cancer remembered using talc on their
5	Q. So roughly the same reporting	5	genitals but basically had no effect on the
6	of genital talc use between women with and	6	memory of women without ovarian cancer; is
7	without ovarian cancer occurred for those	7	that right?
8	women interviewed before the lawsuits were	8	MS. O'DELL: Object to the
9	filed; is that right?	9	form.
10	A. That's correct.	10	A. You can't say that this is
11	Q. Then look at what happened	11	this demonstrates recall bias. It could.
12	after the lawsuits were filed in 2014. For	12	BY MR. ZELLERS:
13	women interviewed after 2014, the percent of	13	Q. These findings could be an
14	women without ovarian cancer that said they	14	example of the potential effect of recall
15	used talc on their genitals was 34.4%; is	15	bias; is that right?
16	that right?	16	MS. O'DELL: Object to the
17	A. That's correct.	17	form.
18	Q. So based on this data, the	18	A. That is correct.
19	lawsuits had essentially no effect on how	19	BY MR. ZELLERS:
20	many of the women without ovarian cancer, the	20	Q. So pre-2014 there was an odds
21	controls, remembered or recalled using baby	21	ratio of 1.19 with the confidence interval
22	powder; is that right?	22	ranging from .87 to strike that
23	A. Well, the percentage is the	23	from .87 to 1.63, so there is not statistical
24	same in both cases.	24	significance pre-2014; is that right?
	Page 275		Page 277
1	Q. It went from 34% to 34.4%; is	۱ ،	
	Q. 10 Well Hell 5 170 to 5 1170, 15	1	A. Probably not.
2	that right?	2	<ul><li>A. Probably not.</li><li>Q. If the study had been</li></ul>
2			•
	that right?	2	Q. If the study had been
3	that right?  A. That's correct.	2	Q. If the study had been terminated as of 2014, prior to the lawsuits being filed, then the results of the study would have been that genital talc use was not
3 4	that right?  A. That's correct.  Q. For women with ovarian cancer,	2 3 4	Q. If the study had been terminated as of 2014, prior to the lawsuits being filed, then the results of the study would have been that genital talc use was not statistically significantly associated with
3 4 5	that right?  A. That's correct.  Q. For women with ovarian cancer, before the lawsuits were filed, 36.5% of them	2 3 4 5	Q. If the study had been terminated as of 2014, prior to the lawsuits being filed, then the results of the study would have been that genital talc use was not statistically significantly associated with an increased risk of ovarian cancer; is that
3 4 5 6	that right?  A. That's correct.  Q. For women with ovarian cancer, before the lawsuits were filed, 36.5% of them said they recalled using baby powder; is that right?  A. That's right.	2 3 4 5 6	Q. If the study had been terminated as of 2014, prior to the lawsuits being filed, then the results of the study would have been that genital talc use was not statistically significantly associated with an increased risk of ovarian cancer; is that right?
3 4 5 6 7	that right?  A. That's correct.  Q. For women with ovarian cancer, before the lawsuits were filed, 36.5% of them said they recalled using baby powder; is that right?	2 3 4 5 6 7 8	Q. If the study had been terminated as of 2014, prior to the lawsuits being filed, then the results of the study would have been that genital talc use was not statistically significantly associated with an increased risk of ovarian cancer; is that
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3 4 5 6 7 8 9 10	that right?  A. That's correct.  Q. For women with ovarian cancer, before the lawsuits were filed, 36.5% of them said they recalled using baby powder; is that right?  A. That's right.  Q. But after the lawsuits were filed, the percent of women with ovarian cancer who said they used baby powder went up	2 3 4 5 6 7 8 9 10	Q. If the study had been terminated as of 2014, prior to the lawsuits being filed, then the results of the study would have been that genital talc use was not statistically significantly associated with an increased risk of ovarian cancer; is that right?  MS. O'DELL: Object to the form.  A. Yes.
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	Page 278		Page 280
1	A. In the in the data collected	1	factors or latency periods for a number of
2	on those let me see here. In the data	2	different types of cancers and tumors based
3	collected on those 351 cases and	3	on the incidence data and what is known about
4	corresponding controls, there was not a	4	the natural progression of those tumors over
5	significant odds ratio.	5	time.
6	Q. I want to go back and ask you a	6	I can't recall at the moment
7	few questions about some of the things I had	7	exactly where I determined the latency period
8	talked to you before about.	8	for ovarian cancer to be between 20 and
9	In terms of this chatter about	9	40 years.
10	IARC, who has told you this?	10	We do have a paper that's
11	A. There are a number of	11	referenced here that discusses the
12	environmental websites and that also	12	determination of latency periods and includes
13	operate on social media that discuss this	13	ovarian cancer as one of the tumors that it
14	kind of thing.	14	determines a latency period for, and it uses
15	Q. So there's social media	15	a mathematical formula with various factors
16	websites that have talked about at least the	16	plugged into it to calculate that.
17	possibility of IARC revisiting the issue?	17	In that particular article, the
18	A. Yes, among many other things.	18	latency factor period was very long. I
19	Q. I asked you earlier about	19	think it was 44 years on the average.
20	cornstarch, and you believe that cornstarch	20	Q. You do not have personal
21	is rapidly cleared from the body, including	21	expertise in terms of the latency period for
22	the ovaries; is that right?	22	ovarian cancer, correct?
23	MS. O'DELL: Object to the	23	A. I have I've calculated
24	form.	24	latency periods as an exercise when I was in
	Page 279		Page 281
	<u> </u>		1496 201
1		1	
1 2	A. Yes.	1 2	graduate school, but that's not something I
	A. Yes. BY MR. ZELLERS:		graduate school, but that's not something I normally do. I usually defer to the those
2	A. Yes. BY MR. ZELLERS: Q. What is the mechanism by which	2	graduate school, but that's not something I
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2 3 4	A. Yes. BY MR. ZELLERS: Q. What is the mechanism by which you believe that cornstarch is rapidly cleared from the body, including the ovaries?	2 3 4	graduate school, but that's not something I normally do. I usually defer to the those who have published latency periods for that information.
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. Yes. BY MR. ZELLERS: Q. What is the mechanism by which you believe that cornstarch is rapidly cleared from the body, including the ovaries? A. It's primarily composed of carbohydrate with a small amount of structural material, probably cellulose, and those materials are broken down in body fluids fairly rapidly and dissolved and become part of the general milieu of the body. Q. Does cornstarch create inflammation in the body? A. Yes. Q. You testified that the latency period for ovarian cancer is between 20 and 40 years; is that right? A. Roughly, yes. Q. What is the basis for you saying that? A. There are a number of factors	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	graduate school, but that's not something I normally do. I usually defer to the those who have published latency periods for that information.  Q. You are recalling that at least in some of the study or studies that you've reviewed that the latency period for ovarian cancer is 20 to 40 years, correct?  A. Yes.  Q. Are you able to tell us which study or studies you're relying on for that information?  A. I'd have to go through my list to find it. Do you mind if I take a moment to do that?  Q. Define "a moment."  A. Well, however long it takes me to find it in that list, but  Q. Let me see if I can shortcut it.  Do you believe that the latency period for ovarian cancer is something you've

	Page 282		Page 284
1	Q. It would be where would it	1	MS. BOCKUS: If you want to
2	be?	2	pass me your microphone, I think I can
3	MS. O'DELL: If you need a	3	stay here. I'm not going to pass him
4	moment to review either your report or	4	that many exhibits.
5	your materials list, you know	5	MR. ZELLERS: I'm happy to help
6	THE WITNESS: I don't believe	6	you.
7	that particular piece of information	7	MS. BOCKUS: Thank you.
8	is in my report, but it's I think I	8	EXAMINATION
9	could come up with it fairly quickly	9	BY MS. BOCKUS:
10	if I	10	Q. Dr. Carson, my name is Jane
11	BY MR. ZELLERS:	11	Bockus. I'm not certain I actually
12	Q. All right. Go ahead. Find for	12	introduced myself to you this morning, but I
13	us the study or studies you're relying on for	13	represent Imerys in this litigation.
14	the latency period of ovarian cancer.	14	Do you understand that?
15	A. Okay. If I'm lucky, I may hit	15	A. I do.
16	on it here.	16	Q. Before Mr. Abney contacted you
17	(Document review.)	17	about preparing a report that would explain
18	A. It's the Diana Nadler and Igor	18	the relationship between regular perineal use
19	Zurbenko paper Estimating Cancer Latency	19	of talc based on personal hygiene products
20	Times Using the Weibull Model.	20	and subsequent development of ovarian cancer,
21	BY MR. ZELLERS:	21	is that anything that you had researched
22	Q. You're looking at Exhibit 4,	22	before that date?
23	your literature list; is that right?	23	MS. O'DELL: Object to the
24	A. Yes.	24	form.
21	Α. 105.		ioini.
	Page 283		Page 285
1	Q. What page of Exhibit 4 are you	1	A I don't think Mr. Abnox
2			A. I don't think Mr. Abney
2	looking at?	2	well, he may have been that detailed in our
3	A. Page 17 in the Ns.		well, he may have been that detailed in our discussion. But in response to your
3 4	<ul><li>A. Page 17 in the Ns.</li><li>Q. Are you finished?</li></ul>	2	well, he may have been that detailed in our discussion. But in response to your question, that's not a specific question I
3	A. Page 17 in the Ns.	2	well, he may have been that detailed in our discussion. But in response to your
3 4	<ul><li>A. Page 17 in the Ns.</li><li>Q. Are you finished?</li></ul>	2 3 4	well, he may have been that detailed in our discussion. But in response to your question, that's not a specific question I
3 4 5	<ul><li>A. Page 17 in the Ns.</li><li>Q. Are you finished?</li><li>A. There may be others in the</li></ul>	2 3 4 5	well, he may have been that detailed in our discussion. But in response to your question, that's not a specific question I had researched in the past, although I had researched related kinds of issues. BY MS. BOCKUS:
3 4 5 6	<ul><li>A. Page 17 in the Ns.</li><li>Q. Are you finished?</li><li>A. There may be others in the list, but you asked me to cite one. You want</li></ul>	2 3 4 5 6	well, he may have been that detailed in our discussion. But in response to your question, that's not a specific question I had researched in the past, although I had researched related kinds of issues.
3 4 5 6 7	A. Page 17 in the Ns. Q. Are you finished? A. There may be others in the list, but you asked me to cite one. You want me to continue looking?	2 3 4 5 6 7	well, he may have been that detailed in our discussion. But in response to your question, that's not a specific question I had researched in the past, although I had researched related kinds of issues.  BY MS. BOCKUS:  Q. So would it be fair to say that the opinions contained in your report are all
3 4 5 6 7 8	A. Page 17 in the Ns. Q. Are you finished? A. There may be others in the list, but you asked me to cite one. You want me to continue looking? Q. No, I that is sufficient for	2 3 4 5 6 7 8	well, he may have been that detailed in our discussion. But in response to your question, that's not a specific question I had researched in the past, although I had researched related kinds of issues.  BY MS. BOCKUS:  Q. So would it be fair to say that
3 4 5 6 7 8 9	A. Page 17 in the Ns. Q. Are you finished? A. There may be others in the list, but you asked me to cite one. You want me to continue looking? Q. No, I that is sufficient for my purposes. Thank you.	2 3 4 5 6 7 8 9 10	well, he may have been that detailed in our discussion. But in response to your question, that's not a specific question I had researched in the past, although I had researched related kinds of issues.  BY MS. BOCKUS:  Q. So would it be fair to say that the opinions contained in your report are all
3 4 5 6 7 8 9	A. Page 17 in the Ns. Q. Are you finished? A. There may be others in the list, but you asked me to cite one. You want me to continue looking? Q. No, I that is sufficient for my purposes. Thank you. Dr. Carson, there have been	2 3 4 5 6 7 8 9	well, he may have been that detailed in our discussion. But in response to your question, that's not a specific question I had researched in the past, although I had researched related kinds of issues.  BY MS. BOCKUS:  Q. So would it be fair to say that the opinions contained in your report are all opinions that you have come to as a result of
3 4 5 6 7 8 9 10	A. Page 17 in the Ns. Q. Are you finished? A. There may be others in the list, but you asked me to cite one. You want me to continue looking? Q. No, I that is sufficient for my purposes. Thank you. Dr. Carson, there have been some studies where talc particles had been	2 3 4 5 6 7 8 9 10	well, he may have been that detailed in our discussion. But in response to your question, that's not a specific question I had researched in the past, although I had researched related kinds of issues.  BY MS. BOCKUS:  Q. So would it be fair to say that the opinions contained in your report are all opinions that you have come to as a result of doing the research at the request of
3 4 5 6 7 8 9 10 11	A. Page 17 in the Ns. Q. Are you finished? A. There may be others in the list, but you asked me to cite one. You want me to continue looking? Q. No, I that is sufficient for my purposes. Thank you. Dr. Carson, there have been some studies where talc particles had been observed or reported in the ovaries of women	2 3 4 5 6 7 8 9 10 11	well, he may have been that detailed in our discussion. But in response to your question, that's not a specific question I had researched in the past, although I had researched related kinds of issues.  BY MS. BOCKUS:  Q. So would it be fair to say that the opinions contained in your report are all opinions that you have come to as a result of doing the research at the request of Mr. Abney and others in the plaintiffs'
3 4 5 6 7 8 9 10 11 12	A. Page 17 in the Ns. Q. Are you finished? A. There may be others in the list, but you asked me to cite one. You want me to continue looking? Q. No, I that is sufficient for my purposes. Thank you. Dr. Carson, there have been some studies where talc particles had been observed or reported in the ovaries of women who have had perineal talc use; is that	2 3 4 5 6 7 8 9 10 11 12	well, he may have been that detailed in our discussion. But in response to your question, that's not a specific question I had researched in the past, although I had researched related kinds of issues.  BY MS. BOCKUS:  Q. So would it be fair to say that the opinions contained in your report are all opinions that you have come to as a result of doing the research at the request of Mr. Abney and others in the plaintiffs' lawyer group?
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3 4 5 6 7 8 9 10 11 12 13 14 15	A. Page 17 in the Ns. Q. Are you finished? A. There may be others in the list, but you asked me to cite one. You want me to continue looking? Q. No, I that is sufficient for my purposes. Thank you. Dr. Carson, there have been some studies where talc particles had been observed or reported in the ovaries of women who have had perineal talc use; is that right? A. Yes.	2 3 4 5 6 7 8 9 10 11 12 13 14 15	well, he may have been that detailed in our discussion. But in response to your question, that's not a specific question I had researched in the past, although I had researched related kinds of issues.  BY MS. BOCKUS:  Q. So would it be fair to say that the opinions contained in your report are all opinions that you have come to as a result of doing the research at the request of Mr. Abney and others in the plaintiffs' lawyer group?  MS. O'DELL: Object to the form.
3 4 5 6 7 8 9 10 11 12 13 14 15 16	A. Page 17 in the Ns. Q. Are you finished? A. There may be others in the list, but you asked me to cite one. You want me to continue looking? Q. No, I that is sufficient for my purposes. Thank you. Dr. Carson, there have been some studies where talc particles had been observed or reported in the ovaries of women who have had perineal talc use; is that right? A. Yes. Q. Heller was one of the studies	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	well, he may have been that detailed in our discussion. But in response to your question, that's not a specific question I had researched in the past, although I had researched related kinds of issues.  BY MS. BOCKUS:  Q. So would it be fair to say that the opinions contained in your report are all opinions that you have come to as a result of doing the research at the request of Mr. Abney and others in the plaintiffs' lawyer group?  MS. O'DELL: Object to the form.  A. Yes.
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3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. Page 17 in the Ns. Q. Are you finished? A. There may be others in the list, but you asked me to cite one. You want me to continue looking? Q. No, I that is sufficient for my purposes. Thank you. Dr. Carson, there have been some studies where talc particles had been observed or reported in the ovaries of women who have had perineal talc use; is that right? A. Yes. Q. Heller was one of the studies that we talked about, correct? A. Correct.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	well, he may have been that detailed in our discussion. But in response to your question, that's not a specific question I had researched in the past, although I had researched related kinds of issues.  BY MS. BOCKUS:  Q. So would it be fair to say that the opinions contained in your report are all opinions that you have come to as a result of doing the research at the request of Mr. Abney and others in the plaintiffs' lawyer group?  MS. O'DELL: Object to the form.  A. Yes. BY MS. BOCKUS:
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. Page 17 in the Ns. Q. Are you finished? A. There may be others in the list, but you asked me to cite one. You want me to continue looking? Q. No, I that is sufficient for my purposes. Thank you. Dr. Carson, there have been some studies where talc particles had been observed or reported in the ovaries of women who have had perineal talc use; is that right? A. Yes. Q. Heller was one of the studies that we talked about, correct? A. Correct. Q. In those studies, there has not	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	well, he may have been that detailed in our discussion. But in response to your question, that's not a specific question I had researched in the past, although I had researched related kinds of issues.  BY MS. BOCKUS:  Q. So would it be fair to say that the opinions contained in your report are all opinions that you have come to as a result of doing the research at the request of Mr. Abney and others in the plaintiffs' lawyer group?  MS. O'DELL: Object to the form.  A. Yes.  BY MS. BOCKUS:  Q. Okay. And I'm going to apologize right now. I'll be jumping around because most of my outline has already been
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	A. Page 17 in the Ns. Q. Are you finished? A. There may be others in the list, but you asked me to cite one. You want me to continue looking? Q. No, I that is sufficient for my purposes. Thank you. Dr. Carson, there have been some studies where talc particles had been observed or reported in the ovaries of women who have had perineal talc use; is that right? A. Yes. Q. Heller was one of the studies that we talked about, correct? A. Correct. Q. In those studies, there has not been inflammation noted; is that right?	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	well, he may have been that detailed in our discussion. But in response to your question, that's not a specific question I had researched in the past, although I had researched related kinds of issues.  BY MS. BOCKUS:  Q. So would it be fair to say that the opinions contained in your report are all opinions that you have come to as a result of doing the research at the request of Mr. Abney and others in the plaintiffs' lawyer group?  MS. O'DELL: Object to the form.  A. Yes.  BY MS. BOCKUS:  Q. Okay. And I'm going to apologize right now. I'll be jumping around because most of my outline has already been covered, so let me just get you to look at
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. Page 17 in the Ns. Q. Are you finished? A. There may be others in the list, but you asked me to cite one. You want me to continue looking? Q. No, I that is sufficient for my purposes. Thank you. Dr. Carson, there have been some studies where talc particles had been observed or reported in the ovaries of women who have had perineal talc use; is that right? A. Yes. Q. Heller was one of the studies that we talked about, correct? A. Correct. Q. In those studies, there has not been inflammation noted; is that right? A. No, there that's not been an	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	well, he may have been that detailed in our discussion. But in response to your question, that's not a specific question I had researched in the past, although I had researched related kinds of issues.  BY MS. BOCKUS:  Q. So would it be fair to say that the opinions contained in your report are all opinions that you have come to as a result of doing the research at the request of Mr. Abney and others in the plaintiffs' lawyer group?  MS. O'DELL: Object to the form.  A. Yes.  BY MS. BOCKUS:  Q. Okay. And I'm going to apologize right now. I'll be jumping around because most of my outline has already been

		ı	
	Page 286		Page 288
1	paragraph (b), the first sentence reads:	1	A. No.
2	Numerous studies have examined the	2	Q. And then going on, you talk
3	cancer-causing characteristics of talc.	3	about the fact that there in that same
4	Do you see that?	4	paragraph, if you go down, you talk about
5	A. Yes.	5	IARC and the fact that IARC concluded that
6	Q. And you identified Wilde as	6	talcum powder use by women for feminine
7	your source for that statement, correct?	7	hygiene is a possible human carcinogen;
8	A. That is correct.	8	that's not a classification of tale as a
9	Q. Isn't it correct that the Wild	9	carcinogen, correct?
10	study actually exonerated talc as having	10	MS. O'DELL: Object to the
11	cancer-causing characteristics?	11	form.
12	A. That was a conclusion of the	12	A. It is within the spectrum of
13	author, but the reason it's cited there is	13	carcinogens.
14	because that's an example of the	14	BY MS. BOCKUS:
15	investigation of the relationship.	15	Q. It's possible.
16	Q. Okay. But in that study,	16	A. That's correct.
17	they he concluded that talc alone did not	17	Q. And then you say that
18	cause cancer, correct?	18	meaning that there is insufficient evidence
19	A. As I recall, that was the	19	•
20	general conclusion, yes.	20	of carcinogenesis in humans, but strong evidence in other mammalian species.
21		21	*
22	Q. Okay. Then in the next couple	22	Can you tell me where in IARC
	of sentences, you say that talc has caused	1	it says that there is strong evidence that
23	cancer when implanted in various tissues and	23 24	talc causes ovarian cancer in other mammalian
24	under the skin in laboratory animals. It	24	species?
	Page 287		Page 289
1	causes inflammation and fibrotic reaction,	1	A. I think the issue is not
2	including the chemotaxis of inflammatory	2	specifically ovarian cancer; the issue is
3	immune cells and accelerated growth and	3	cancer. And that's the point of view of
4	division of cells in the involved tissue.	4	IARC, and that's what's alluded to here.
5	And you cite Okada 2007 for	5	Q. So this is the one exhibit I'm
6	that proposition; is that correct?	6	going to hand you, if I can get that one
7	A. That's correct.	7	marked by my assistant.
8	Q. But Okada wasn't even looking	8	MR. ZELLERS: Exhibit 25.
9	at tale, was it?	9	(Carson Deposition Exhibit 25
10	A. Let me see here. Okada was	10	marked.)
11	looking at inflammation as as the endpoint	11	MS. O'DELL: This is a page out
12	in the various components of inflammation	12	of the monograph?
13	which I talked about here, the chemotaxis of	13	MS. BOCKUS: Yes.
14	inflammatory immune cells, accelerated growth	14	MS. O'DELL: Are you going to
15	division in the involved tissues.	15	identify it?
	Q. But what you say is that talc	16	MS. BOCKUS: And he can look it
16	The state of the s	17	up in his whole monograph. I just
16 17	causes When you say "it " you're referring		pulled the page for simplicity.
17	causes. When you say "it," you're referring	1 18	
17 18	to tale, correct? It causes inflammation and	18 19	
17 18 19	to talc, correct? It causes inflammation and fibrotic reaction; isn't that what you're	19	MS. O'DELL: So feel free to do
17 18 19 20	to talc, correct? It causes inflammation and fibrotic reaction; isn't that what you're saying in this sentence?	19 20	MS. O'DELL: So feel free to do that, Doctor.
17 18 19 20 21	to talc, correct? It causes inflammation and fibrotic reaction; isn't that what you're saying in this sentence?  A. It is talc, yes.	19 20 21	MS. O'DELL: So feel free to do that, Doctor.  MS. BOCKUS: Yes, page 412.
17 18 19 20 21 22	to talc, correct? It causes inflammation and fibrotic reaction; isn't that what you're saying in this sentence?  A. It is talc, yes.  Q. Okay. And yet, Okada, the	19 20 21 22	MS. O'DELL: So feel free to do that, Doctor.  MS. BOCKUS: Yes, page 412. BY MS. BOCKUS:
17 18 19 20 21	to talc, correct? It causes inflammation and fibrotic reaction; isn't that what you're saying in this sentence?  A. It is talc, yes.	19 20 21	MS. O'DELL: So feel free to do that, Doctor.  MS. BOCKUS: Yes, page 412.

		1	
	Page 290		Page 292
1	talks about the data the evidence that	1	black, titanium dioxide and talc.
2	they have and the evidence that they	2	So regarding tale, the overall
3	reviewed.	3	point of view here is whether or not it
4	Do you see that?	4	produces cancer, not just ovarian cancer, not
5	A. That's correct.	5	just lung cancer, but any cancer.
6	Q. And what they actually state	6	And so I'm not sure that that
7	with regard to experimental evidence is that	7	responds to your question.
8	there is limited evidence in experimental	8	BY MS. BOCKUS:
9	animals for the carcinogenicity of talc not	9	Q. No. My question was: You
10	containing asbestos or asbestiform fibers.	10	state in your report that IARC found strong
11	Correct?	11	evidence in animals, and I want to know where
12	MS. O'DELL: Object to the	12	you believe that statement occurs in the IARC
13	form.	13	monograph, or do you know?
14	BY MS. BOCKUS:	14	MS. O'DELL: And if you need a
15	Q. Did I read it incorrectly?	15	minute to look, feel free to do that.
16	A. No, I just lost you for a	16	A. Well, I can say that it might
17	moment.	17	take me a while to look for it, but I can say
18	Q. It's one sentence. Go ahead	18	that that's the basic definition of Group 2B,
19	and take your time and read it.	19	is limited evidence in humans and compelling
20	A. Yes, I agree with that. They	20	evidence in animals or other
21	found that inhaled tale, which does not	21	BY MS. BOCKUS:
22	contain asbestos or asbestiform fibers, is	22	Q. Tell me where you're looking at
23	Group 3.	23	that definition of 2B.
24	Q. That wasn't my question. I'm	24	A. Let me see here.
	Page 291		Page 293
1	talking about experimental animals because	1	Q. We earlier marked the
2	that's what you state in your report that	2	Exhibit 21, I think.
3	IARC found strong evidence in animals, and	3	A. Well, I have this other
4	yet the part of IARC that I know of where	4	exhibit, which is the preamble from another
5	they're addressing the animal data with	5	situation; it's Exhibit P-346, and
6	regard to talc is what I handed you in	6	Q. Well, let me just ask a
7	Section 6.2, and it states there's limited	7	different question, rather than looking at
8	evidence, correct?	8	the preamble.
9	MS. O'DELL: Objection.	9	A. All right.
10	A. It states that there's limited	10	Q. Because that's kind of
11	evidence I need to find this section in	11	overarching.
12	the monograph. Just bear with me for a	12	A. It is.
13	moment. It's page 412?	13	Q. To know what IARC found with
14	(Document review.)	14	regard to talc and the evidence in animal
15	A. Okay. I seem to be missing	15	models, wouldn't it be more appropriate to
16	that part of the monograph.	16	look at what they actually said about talc in
17	MS. O'DELL: Do you have the 93	17	the animal studies?
18	monograph?	18	A. Yes.
19	THE WITNESS: Where's the	19	MS. O'DELL: Objection, form.
20	this is 100C, and this is 93. Okay.	20	A. I would agree that that's the
_ ~	Here it is. All right. Okay.	21	case.
21	$\varepsilon$		
	A. Okay. The entire monograph is	22	BY MS. BOCKUS:
21	5 8 1	22	BY MS. BOCKUS: O. And to your knowledge, nowhere
21 22	A. Okay. The entire monograph is designed to evaluate carcinogenic risk, and it looks at three different species, carbon		Q. And to your knowledge, nowhere did they find strong evidence of

	Page 294		Page 296
1	cancer-causing potential of talc in animal	1	misstates the evidence.
2	studies, correct?	2	A. I believe that was their
3	MS. O'DELL: Objection to form.	3	assumption.
4	A. Well well, it says on that	4	BY MS. BOCKUS:
5	page there's limited evidence in experimental	5	Q. Okay. The studies that you
6	animals, so I'll agree that at least in this	6	reference in support of the notion that
7	location it does not say strong evidence.	7	asbestos in that may or may not exist in
8	BY MS. BOCKUS:	8	body powder contributes to cause ovarian
9	Q. And without going through the	9	cancer, none of the studies that you cite to
10	entire monograph, you don't know where that	10	have referenced an application of a product
11	language came from, is that fair, that you	11	to the perineum of the women and girls study,
12	used in your report?	12	correct?
13	MS. O'DELL: Object. Excuse	13	MS. O'DELL: Object to the
14	me. Object to the form. I think he	14	form.
15	was pointing directing you to the	15	THE WITNESS: I have a I
16	preamble and you withdrew your	16	apologize greatly, but I lost the
17	question, but	17	track. Could you repeat that
18	MS. BOCKUS: Well, let me just	18	question.
19	ask a qualifying question.	19	MS. BOCKUS: That's totally
20	BY MS. BOCKUS:	20	understandable because it was a little
21	Q. Does the preamble in any way	21	bit convoluted.
22	address their findings with regards to talc?	22	MS. O'DELL: Do you mind if we
23	A. No, the preamble addresses the	23	get the realtime running again? We're
24	methodology that's used by the IARC agency in	24	just off track here.
21	inclinuology that's used by the TARC agency in	24	just off track fiere.
	Page 295		Page 297
1	addressing all the substances that they	1	MS. BOCKUS: That's okay.
2	evaluate.	2	BY MS. BOCKUS:
3	Q. Okay.	3	Q. I'm looking on page 5. Do you
4	A. And that's usually where I pull	4	see on page 5 of your report, sir,
5	things like that.	5	paragraph (c)?
6	MS. O'DELL: Are you finished,	6	A. Yes.
7	Doctor?	7	Q. And there you cite one, two,
			Q. And there you ene one, two,
8	THE WITNESS: Unless I'm going	8	three, four, five, six, seven, eight, nine,
8 9	THE WITNESS: Unless I'm going to continue to search for this.	8 9	
_		_	three, four, five, six, seven, eight, nine,
9	to continue to search for this.	9	three, four, five, six, seven, eight, nine, 10, 11, 12 studies, correct?
9 10	to continue to search for this. BY MS. BOCKUS:	9	three, four, five, six, seven, eight, nine, 10, 11, 12 studies, correct?  A. Yes.
9 10 11	to continue to search for this.  BY MS. BOCKUS:  Q. I don't need for you to look in	9 10 11	three, four, five, six, seven, eight, nine, 10, 11, 12 studies, correct?  A. Yes. Q. Do you speak Italian?
9 10 11 12	to continue to search for this. BY MS. BOCKUS: Q. I don't need for you to look in the preamble, because I'm really only	9 10 11 12	three, four, five, six, seven, eight, nine, 10, 11, 12 studies, correct?  A. Yes. Q. Do you speak Italian? A. I can read it pretty well.
9 10 11 12 13	to continue to search for this. BY MS. BOCKUS: Q. I don't need for you to look in the preamble, because I'm really only interested in their findings as to talc, not	9 10 11 12 13	three, four, five, six, seven, eight, nine, 10, 11, 12 studies, correct?  A. Yes. Q. Do you speak Italian? A. I can read it pretty well. Q. Is that what you did for the
9 10 11 12 13 14	to continue to search for this. BY MS. BOCKUS: Q. I don't need for you to look in the preamble, because I'm really only interested in their findings as to talc, not their overarching methodology, that sort of	9 10 11 12 13 14	three, four, five, six, seven, eight, nine, 10, 11, 12 studies, correct?  A. Yes. Q. Do you speak Italian? A. I can read it pretty well. Q. Is that what you did for the Bertolotti study?
9 10 11 12 13 14 15	to continue to search for this. BY MS. BOCKUS: Q. I don't need for you to look in the preamble, because I'm really only interested in their findings as to talc, not their overarching methodology, that sort of thing.	9 10 11 12 13 14	three, four, five, six, seven, eight, nine, 10, 11, 12 studies, correct?  A. Yes. Q. Do you speak Italian? A. I can read it pretty well. Q. Is that what you did for the Bertolotti study? A. The Bertolotti study. Yes, I
9 10 11 12 13 14 15	to continue to search for this.  BY MS. BOCKUS:  Q. I don't need for you to look in the preamble, because I'm really only interested in their findings as to talc, not their overarching methodology, that sort of thing.  A. Okay. But it's important to	9 10 11 12 13 14 15	three, four, five, six, seven, eight, nine, 10, 11, 12 studies, correct?  A. Yes. Q. Do you speak Italian? A. I can read it pretty well. Q. Is that what you did for the Bertolotti study? A. The Bertolotti study. Yes, I read most of it. I may have kibitzed with
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9 10 11 12 13 14 15 16 17 18 19 20 21	to continue to search for this. BY MS. BOCKUS: Q. I don't need for you to look in the preamble, because I'm really only interested in their findings as to talc, not their overarching methodology, that sort of thing. A. Okay. But it's important to point out that this particular monograph is an evaluation of the carcinogenicity of talc that does not contain asbestos or asbestiform fibers, so	9 10 11 12 13 14 15 16 17 18 19 20 21	three, four, five, six, seven, eight, nine, 10, 11, 12 studies, correct?  A. Yes. Q. Do you speak Italian? A. I can read it pretty well. Q. Is that what you did for the Bertolotti study? A. The Bertolotti study. Yes, I read most of it. I may have kibitzed with some of my colleagues about the meaning of a few words. Q. At any rate, all of these studies have to do with heavy occupational

	Page 298		Page 300
1	BY MS. BOCKUS:	1	microenvironment, and based on what we know
2	Q. And you don't have any	2	about the mechanism of action of talc as well
3	information how the dose of asbestos to which	3	and even asbestos, they're all similar, and
4	these women were exposed during their heavy	4	for that reason would be expected to be
5	occupational exposure compares to any	5	additive.
6	exposure to asbestos from the use of body	6	Q. But the study hasn't been done
7	powder, correct?	7	even in a petri dish, has it?
8	A. Well, I think these were not	8	MS. O'DELL: Object to the
9	all occupational exposures, but I do not have	9	form.
10	information regarding things like the route	10	A. I don't know if there's
11	of exposure, no.	11	something in progress or not, but that's the
12	Q. Do you have any information	12	kind of study that is currently being looked
13	regarding the dose?	13	at. Combined exposures is the sort of the
14	A. No, I don't.	14	hallmark of research these days in
15	Q. Do you have any information	15	toxicology.
16	that would compare the dose of asbestos to	16	BY MS. BOCKUS:
17	which the women in these studies were	17	Q. Do you know of anyone who's
18	exposed	18	looking at that question?
19	A. Well, in some of the studies	19	A. I don't.
20	Q. Wait, I haven't finished my	20	Q. Okay. Have any of the heavy
21	question.	21	metals that you have identified been
22	A. Sorry.	22	identified as carcinogenic to the ovary by
23	Q to any alleged dose of	23	IARC?
24	asbestos in body powder?	24	A. No.
	Page 299		Page 301
1		1	Page 301
1 2	Can you make any comparison	1 2	Q. I want you to turn to page 7
2	Can you make any comparison whatsoever to the amount of asbestos to which	2	Q. I want you to turn to page 7 now, if you would, please, on other evidence.
2 3	Can you make any comparison whatsoever to the amount of asbestos to which these women were exposed to any exposure by	2 3	Q. I want you to turn to page 7 now, if you would, please, on other evidence. And you've talked about this paragraph a fair
2 3 4	Can you make any comparison whatsoever to the amount of asbestos to which these women were exposed to any exposure by any woman who has used a Johnson & Johnson	2 3 4	Q. I want you to turn to page 7 now, if you would, please, on other evidence. And you've talked about this paragraph a fair amount already, and I don't want to repeat
2 3	Can you make any comparison whatsoever to the amount of asbestos to which these women were exposed to any exposure by any woman who has used a Johnson & Johnson body powder?	2 3 4 5	Q. I want you to turn to page 7 now, if you would, please, on other evidence. And you've talked about this paragraph a fair amount already, and I don't want to repeat any of the prior questions.
2 3 4 5	Can you make any comparison whatsoever to the amount of asbestos to which these women were exposed to any exposure by any woman who has used a Johnson & Johnson body powder?  MS. O'DELL: Object to the	2 3 4	Q. I want you to turn to page 7 now, if you would, please, on other evidence. And you've talked about this paragraph a fair amount already, and I don't want to repeat any of the prior questions.  But I want to ask you about the
2 3 4 5 6	Can you make any comparison whatsoever to the amount of asbestos to which these women were exposed to any exposure by any woman who has used a Johnson & Johnson body powder?	2 3 4 5 6	Q. I want you to turn to page 7 now, if you would, please, on other evidence. And you've talked about this paragraph a fair amount already, and I don't want to repeat any of the prior questions.  But I want to ask you about the statement in that first sentence, where you
2 3 4 5 6 7 8	Can you make any comparison whatsoever to the amount of asbestos to which these women were exposed to any exposure by any woman who has used a Johnson & Johnson body powder?  MS. O'DELL: Object to the form.  A. I don't think I'm able to make	2 3 4 5 6 7 8	Q. I want you to turn to page 7 now, if you would, please, on other evidence. And you've talked about this paragraph a fair amount already, and I don't want to repeat any of the prior questions.  But I want to ask you about the statement in that first sentence, where you say that transport of talc-containing
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Can you make any comparison whatsoever to the amount of asbestos to which these women were exposed to any exposure by any woman who has used a Johnson & Johnson body powder?  MS. O'DELL: Object to the form.  A. I don't think I'm able to make that kind of comparison.  BY MS. BOCKUS:  Q. Okay. There are ways to study whether two toxins combined increase a risk more than exposure to a single toxin, whether it whether one offsets the risk of one of the toxins or whether you add them together, even multiply them together, right?  A. Yes.  Q. Has any such study ever been done with regard to talc and the heavy metals that you identify in your report?  A. Not specifically a study to look at the combined contribution, but we	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Q. I want you to turn to page 7 now, if you would, please, on other evidence. And you've talked about this paragraph a fair amount already, and I don't want to repeat any of the prior questions.  But I want to ask you about the statement in that first sentence, where you say that transport of talc-containing materials from the perineum to the upper reproductive tract and body cavities has been shown to occur with startling regularity. And I want to stop right there.  If I recall your testimony correctly, none of these studies even look at the transport of talc-containing materials from the perineum to the upper reproductive tract; isn't that correct?  MS. O'DELL: Object to the form.  A. Well, it is true that most of the research that's been done in this area has been done on materials that have been
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Can you make any comparison whatsoever to the amount of asbestos to which these women were exposed to any exposure by any woman who has used a Johnson & Johnson body powder?  MS. O'DELL: Object to the form.  A. I don't think I'm able to make that kind of comparison.  BY MS. BOCKUS:  Q. Okay. There are ways to study whether two toxins combined increase a risk more than exposure to a single toxin, whether it whether one offsets the risk of one of the toxins or whether you add them together, even multiply them together, right?  A. Yes.  Q. Has any such study ever been done with regard to talc and the heavy metals that you identify in your report?  A. Not specifically a study to look at the combined contribution, but we	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Q. I want you to turn to page 7 now, if you would, please, on other evidence. And you've talked about this paragraph a fair amount already, and I don't want to repeat any of the prior questions.  But I want to ask you about the statement in that first sentence, where you say that transport of talc-containing materials from the perineum to the upper reproductive tract and body cavities has been shown to occur with startling regularity. And I want to stop right there.  If I recall your testimony correctly, none of these studies even look at the transport of talc-containing materials from the perineum to the upper reproductive tract; isn't that correct?  MS. O'DELL: Object to the form.  A. Well, it is true that most of the research that's been done in this area has been done on materials that have been

application to the perineum is equivalent to that.  Q. Do you have an opinion as to what percentage of the talcum powder applied in a daily dusting to the perineum makes its way to the vagina?  A. No, I don't know.  Q. Do you have an opinion as to what percentage of the talc that, in your opinion, would make its way to the veryin?  A. I don't know that either.  A. I don't know that either.  A. I don't know that either.  A. That, I don't know either.  A. No, I don't have reason to believe that talc would migrate with more frequency or rapidity than sperm?  A. No, I don't have reason to believe that would be the case.  BY MS. BOCKUS:  Page 303  Page 303  Page 304  Page 305  A. The studies that I list in other evidence?  A. I think not.  A. I think not.  A. I think not.  A. I think not.  A. No.  Q. In fact, were any of them done in women who were inclined with their here elevated over their hips?  A. No.  Q. So my question is: Where do you get the term "startling regularity" with regard to the transport of talc from outside a woman's body to the upper reproductive tract?  MS. O'DELL: Object to the form.  Page 303  Page 303  Page 303  Page 304  Page 305				
women who were standing up?  A. The studies that I list in other evidence?  Q. Yes.  A. No, I don't know.  B. Q. Do you have an opinion as to what percentage of the talcum powder applied in a daily dusting to the perineum makes its way to the vagina?  A. No, I don't know.  B. Q. Do you have an opinion as to what percentage of the talc that, in your opinion, would make its way to the vagina opinion and the talc that, in your opinion, would make its way to the vagina would actually make its way to the cervix?  A. I don't know that either.  A. I don't know that either.  A. That, I don't know either.  D. Do you have any reason to believe that tale would migrate with more frequency or rapidity than sperm?  MS. O'DELL: Objection to form.  A. No, I don't have reason to believe that would be the case.  BY MS. BOCKUS:  Would you agree, in fact, that  Page 303  it is unlikely that talc, an inert particle, would travel as quickly or in the same percentages as sperm through the reproductive tract?  MS. O'DELL: Object to the form.  MS. O'DELL: Object to the form.  MS. O'DELL: Object to the form.  A. I think the transport of late from outside with their here eleved dover their hisp?  A. No, Q. So my question is: Where do you get the term "startling regularity" with regard to the transport of talc from outside with their here elevent with more frequency or rapidity than sperm?  MS. O'DELL: Object to the form.  A. No, I don't have reason to the perineum double the case.  BY MS. BOCKUS:  MS. O'DELL: Object to the form.  A. I think the transport time is roughly the same for any particulate matter, including sperm.  MS. O'DELL: Object to the form.  A. I think the transport time is roughly the same for any particulate matter, including sperm.  MS. O'DELL: Object to the form.  A. I think the transport time is roughly the same for any particulate matter, including sperm.  BY MS. BOCKUS:  D. O you have any studies to support that opinion?  A. Well, we have either studies to support that opinion?  A. Well, we have studies that have sh		Page 302		Page 304
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7 A. No, I don't know. 8 8 Q. Do you have an opinion as to 9 what percentage of the tale that, in your 10 opinion, would make its way to the vagina 11 would actually make its way to the cervix? 12 A. I don't know that either. 12 13 Q. And out of the tale that makes 14 its way to the cervix, what percentage makes 15 it past the cervix, what percentage makes 16 A. That, I don't know either. 16 17 Q. Do you have any reason to 18 believe that tale would migrate with more 19 frequency or rapidity than sperm? 19 20 MS. O'D'ELL: Objection to form. 21 21 A. No, I don't have reason to 22 believe that would be the case. 22 23 BY MS. BOCKUS: 23 24 Q. Would you agree, in fact, that 24 25 MS. O'D'ELL: Object to the form. 25 26 form. 26 27 A. I think the transport time is percentages as sperm through the reproductive tract? 4 28 tract? 8 29 MS. O'D'ELL: Object to the form. 27 30 MS. O'D'ELL: Object to the form. 28 31 it is unlikely that tale, an inert particle, 29 would travel as quickly or in the same 29 approaches a sperm through the reproductive 30 32 percentages as sperm through the reproductive 4 tract? 4 38 MS. O'D'ELL: Object to the 6 form. 4 4 tract? 9 4 MS. O'D'ELL: Object to the 6 form. 6 5 MS. O'D'ELL: Object to the 6 form. 6 6 MS. O'D'ELL: Object to the 6 form. 6 6 MS. O'D'ELL: Object to the 6 form. 6 6 MS. O'D'ELL: Object to the 6 form. 6 6 MS. O'D'ELL: Object to the 6 form. 6 7 A. I think the transport time is 70 roughly the same for any particulate matter, 30 including sperm. 30 10 BY MS. BOCKUS: 10 11 Q. Do you have any studies to 30 12 support that opinion? 3 13 A. Well, we know - we know the - 40 we know the velocity of motile sperm; it's 40 very slow. And we have studies that have 5 shown the progression of particles through the fallopian tubes at at least that fats a 12 18 rate, possibly faster. 19 19 And so the motility of sperm is 50 slower than the rate at which it passes 50 through the female reproductive system, so 50 through the female reproductive system, so 50 through the female reproductive syste			5	
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11   Would actually make its way to the cervix?   12   A. I don't know that either.   12   you get the term 'startling regularity' with regard to the transport of tale from outside a woman's body to the upper reproductive tract?   15   tract?   Tartling regularity with regard to the transport of tale from outside a woman's body to the upper reproductive tract?   Tartling regularity with regard to the transport of tale from outside a woman's body to the upper reproductive tract?   MS. O'DELL: Object to the form.   16   MS. O'DELL: Object to the form.   17   A. The propensity of evidence of rapid transport of particulate material regarding regardless of its composition.   BY MS. BOCKUS:   23   BY MS. BOCKUS:   23   BY MS. BOCKUS:   24   Q. Would you agree, in fact, that   24   BY MS. BOCKUS:   25   BY MS. BOCKUS:   25   BY MS. BOCKUS:   26   BY MS. BOCKUS:   27   A. Well, we have the same   28   BY MS. BOCKUS:   29   BY MS. BOCKUS:   20   BY MS. BOCKUS:   21   BY MS. BOCKUS:   22   BY MS. BOCKUS:   23   BY MS. BOCKUS:   24   BY MS. BOCKUS:   25   BY MS. BOCKUS:   26   BY MS. BOCKUS:   27   BY MS. BOCKUS:   28   BY MS. BOCKUS:   29   BY MS. BOCKUS:   29   BY MS. BOCKUS:   20   BY MS. BOCKU	9	what percentage of the talc that, in your	9	elevated over their hips?
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17   Q. Do you have any reason to believe that tale would migrate with more frequency or rapidity than sperm?   19	16	*	l	
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23 other than sperm motility. 23 Q. Okay. Sure.			l	
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2. To your knowledge, were any or 27 A which is the complete			1	
I I	41	2. To your knowledge, were any or		21 which is the complete

	Page 306		Page 308
1	product.	1	A. There may not have been use of
2	I came to that conclusion based	2	talcum powder in all those women, that's
3	on the number of new cases of ovarian cancer	3	correct.
4	that are diagnosed in the United States each	4	Q. Do you have any notion as to
5	year and the number of ovarian cancer deaths	5	what percent of those women may have used
6	that occur each year.	6	talcum powder?
7	And essentially, of 21,000 or	7	A. Based on these various studies,
8	so cases of new cases of ovarian cancer,	8	it seems to vary between 30 and 60%. It's
9	there are corresponding 14,000 or more deaths	9	more so in the U.S., Australia and the U.K.
10	each year, so that's a two-thirds fatality	10	Q. Do you have an opinion as to
11	rate if you look over time.	11	how regularly a women needs to use talcum
12	The at 30% increase in the	12	powder before her risk of ovarian cancer is
13	risk of or a 30% increase in the risk of	13	increased by 30%?
14	cancer applied in reverse, that is reducing	14	A. Well, based on the epidemiology
15	those that 30% increased risk from the use	15	studies, that risk occurs in the population
16	of perineal application of talcum powder	16	in general from ever use as opposed to never
17	could result in the prevention of as many as	17	use, and so it would depend on the individual
18	3,000 lives, depending on the prevalence of	18	woman.
19	use.	19	Each person has an individual
20	Q. Would that calculation require	20	susceptibility and individual characteristics
21	that 100% of the women in the U.S. be using	21	and would probably have an individual use
22	talcum powder on a daily basis?	22	pattern. So I couldn't say for any
23	A. It would require a hundred	23	individual woman.
24	percent of the women in the U.S. to stop	24	Q. And that's not what I'm asking
	- 005		
	Page 307		Page 309
1	using talcum powder on a daily basis.	1	Page 309 for. I'm really asking for in general,
1 2	_	1 2	for. I'm really asking for in general, because that's what epidemiology is, correct?
	using talcum powder on a daily basis.		for. I'm really asking for in general,
2	using talcum powder on a daily basis.  Q. That wasn't my question.  In order to attribute  A. Well, my answer to your	2	for. I'm really asking for in general, because that's what epidemiology is, correct?
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2 3 4	using talcum powder on a daily basis.  Q. That wasn't my question.  In order to attribute  A. Well, my answer to your question then is no.  Q. In order to attribute 30% of	2 3 4	for. I'm really asking for in general, because that's what epidemiology is, correct? It's not talking about an individual woman, right?  A. That's correct, it's describing it in the population.
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2 3 4 5 6	using talcum powder on a daily basis.  Q. That wasn't my question.  In order to attribute  A. Well, my answer to your question then is no.  Q. In order to attribute 30% of all ovarian cancer deaths to the use of talcum powder let me back up.	2 3 4 5 6	for. I'm really asking for in general, because that's what epidemiology is, correct? It's not talking about an individual woman, right?  A. That's correct, it's describing it in the population.  Q. So in the population, in the studies that you've reviewed, what is the
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	using talcum powder on a daily basis.  Q. That wasn't my question. In order to attribute A. Well, my answer to your question then is no. Q. In order to attribute 30% of all ovarian cancer deaths to the use of talcum powder let me back up. The data that you have that you've cited is talking about the percentage of women the percentage of women who use talcum powder who are diagnosed with ovarian cancer, correct? MS. O'DELL: Object to the form. A. It is the total number of new diagnoses per year. BY MS. BOCKUS: Q. Okay. A. I think last year was 22,000-something. Q. But that number, 22,000, 100% of those women did not use talcum powder,	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	for. I'm really asking for in general, because that's what epidemiology is, correct? It's not talking about an individual woman, right?  A. That's correct, it's describing it in the population.  Q. So in the population, in the studies that you've reviewed, what is the minimum number of days per month, or however you want to describe it, that a woman would need to use talcum powder before she would be included in the group that you believe have a 30% increased risk of ovarian cancer?  MS. O'DELL: Object to the form.  A. The only qualifier that I've been able to come up with and that I've used in this report is the regular use of talcum powder.  BY MS. BOCKUS:  Q. Okay.  A. And that is going to vary over a broad range. It would be periodically
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	using talcum powder on a daily basis.  Q. That wasn't my question. In order to attribute A. Well, my answer to your question then is no. Q. In order to attribute 30% of all ovarian cancer deaths to the use of talcum powder let me back up. The data that you have that you've cited is talking about the percentage of women the percentage of women who use talcum powder who are diagnosed with ovarian cancer, correct? MS. O'DELL: Object to the form. A. It is the total number of new diagnoses per year. BY MS. BOCKUS: Q. Okay. A. I think last year was 22,000-something. Q. But that number, 22,000, 100%	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	for. I'm really asking for in general, because that's what epidemiology is, correct? It's not talking about an individual woman, right?  A. That's correct, it's describing it in the population.  Q. So in the population, in the studies that you've reviewed, what is the minimum number of days per month, or however you want to describe it, that a woman would need to use talcum powder before she would be included in the group that you believe have a 30% increased risk of ovarian cancer?  MS. O'DELL: Object to the form.  A. The only qualifier that I've been able to come up with and that I've used in this report is the regular use of talcum powder.  BY MS. BOCKUS:  Q. Okay.  A. And that is going to vary over

	Page 310		Page 312
1	regular use.	1	no threshold of exposure for risk; that we
2	Q. And over how many years must a	2	are we are right to use a zero threshold
3	woman use talcum powder on a regular basis	3	approach until we know more about the
4	before her risk of ovarian cancer is	4	possibility of a threshold below which
5	increased to 30%	5	exposure would be safe. At the current time
6	MS. O'DELL: Object to the	6	we don't have that information.
7	form.	7	Q. Do you believe that there
8	BY MS. BOCKUS:	8	probably is a threshold below which use is
9	Q in your opinion?	9	safe?
10	MS. BOCKUS: Sorry.	10	A. In the carcinogenic process,
11	A. Some of the studies have	11	which we haven't really talked about in this
12	focused on usage periods as short as one	12	session today, there is an insult to a cell
13	year, but most have studied longer periods of	13	which affects the genetic material, the DNA.
14	use and separated use into things like	14	And there are built-in repair mechanisms that
15	decades or accumulated total person-years	15	the cell has for fixing that problem that
16	based on reports of the women, multiplying	16	occurred, a mutation, for example.
17	frequency by time.	17	These kinds of insults are
18	So again, it would depend on	18	happening to cells all the time, not just
19	the individual, but the research reports	19	from carcinogens in our environment, but just
20	hover around five to ten years of regular	20	from natural occurrences, even endogenous
21	use, resulting in significant odds ratios.	21	biochemical reactions cause these problems.
22	BY MS. BOCKUS:	22	The question is: Is the repair
23	Q. As I understand it in	23	process sufficient to undo what's been done?
24	toxicology, one of the basic tenets is that	24	And an exposure to environmental carcinogens,
	Page 311		Page 313
1	it's the dose that makes the poison, correct?	1	that repair process is often overwhelmed so
2	A. That's correct.	2	that it cannot catch up with the damage
3	Q. That water can kill you if you	3	that's being created, and a tumor is born,
4	drink too much of it, right?		
	arnik too maen or it, right.	4	basically.
5	A. Theoretically.	4 5	basically.  That is where the concept of
5 6			
	A. Theoretically.	5	That is where the concept of
6	<ul><li>A. Theoretically.</li><li>Q. In a short period of time.</li></ul>	5 6	That is where the concept of threshold comes from. Have we overwhelmed
6 7	<ul><li>A. Theoretically.</li><li>Q. In a short period of time.</li><li>And so I'm trying to find out</li></ul>	5 6 7	That is where the concept of threshold comes from. Have we overwhelmed the repair or not, and we don't have enough
6 7 8	A. Theoretically. Q. In a short period of time. And so I'm trying to find out what you have determined is the threshold of	5 6 7 8	That is where the concept of threshold comes from. Have we overwhelmed the repair or not, and we don't have enough research evidence or scientific evidence to
6 7 8 9	A. Theoretically. Q. In a short period of time. And so I'm trying to find out what you have determined is the threshold of risk is for talcum powder use by women.	5 6 7 8 9	That is where the concept of threshold comes from. Have we overwhelmed the repair or not, and we don't have enough research evidence or scientific evidence to be able to define that line at this point.
6 7 8 9 10	A. Theoretically. Q. In a short period of time. And so I'm trying to find out what you have determined is the threshold of risk is for talcum powder use by women. Do you have an opinion as to at what point a	5 6 7 8 9	That is where the concept of threshold comes from. Have we overwhelmed the repair or not, and we don't have enough research evidence or scientific evidence to be able to define that line at this point.  Q. Has there ever been a study
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6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. Theoretically. Q. In a short period of time. And so I'm trying to find out what you have determined is the threshold of risk is for talcum powder use by women. Do you have an opinion as to at what point a threshold has been reached where the use of talcum powder by women in their perineal region increases their risk? A. I think any use of carcinogenic materials or any exposure to carcinogenic materials increases the risk somewhat. A greater exposure, based on the "dose makes the poison" principle, would result in a greater risk. And we know from toxicologic studies that intense exposures can sometimes accelerate the process and even shorten the	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	That is where the concept of threshold comes from. Have we overwhelmed the repair or not, and we don't have enough research evidence or scientific evidence to be able to define that line at this point.  Q. Has there ever been a study that showed that talcum powder caused DNA damage in normal ovarian epithelial tissue?  A. Well, we do have the studies that have recently been produced by Fletcher and Saed that show the inflammatory process is influenced by talc, and this is nonfibrous talc, that result in mutagenic events that are available for promotion, and there are biomarkers that have also been established for that.  Q. The studies by Saed did not demonstrate DNA mutation, did they?

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	Page 314		Page 316
1	A. I think they actually did.	1	THE WITNESS: I'm sorry, it
2	BY MS. BOCKUS:	2	appears that I do need to get the
3	Q. That's your reading of them?	3	original paper here. There it is.
4	A. Yes.	4	Okay. Thank you.
5	Q. What Saed did is he placed talc	5	(Document review.)
6	on cultured ovarian cancer cells, correct?	6	BY MS. BOCKUS:
7	A. Yes.	7	Q. Can you answer the question:
8	Q. And that actually what he	8	Did Saed have any either positive or negative
9	recorded was an elevation in the CA-125?	9	controls that he used in his experiments?
10	A. That's one of the things he	10	MS. O'DELL: Object to the
11	did. He also measured he did a number of	11	form.
12	genetic studies. He did transcribed RNA. He	12	A. I think he did, but I'd like to
13	located individual SNPs, which are single	13	actually find it in here so I can give you
14	nucleotide polymorphisms, in the genetic	14	the specifics.
15	material.	15	Well, he used normal cells and
16	And he found that as a result	16	epithelial ovarian cancer cells, and one was
17	of that treatment, those mutations altered	17	the control for the other. He treated them
18	the effectiveness of antioxidant enzymes that	18	in the same way.
19	are part of the protection mechanism and	19	BY MS. BOCKUS:
20	shield the repair process of the cell from	20	Q. Let me ask a different
21	further damage.	21	question.
22	Q. Let's go back to the CA-125.	22	What I'm asking is: Did he
23	MS. O'DELL: If you need to	23	use, say, glass beads to see if as a
24	pull the paper out, Doctor, just, if	24	control to the talc? Did he have anything
			, c
	Page 315		Page 317
1	you want to take a moment and do that.	1	that he was controlling the cells' reaction
2	I know you were searching for it while	2	to against the talc?
3	you were talking.	3	A. I don't believe so.
4	THE WITNESS: Yes, I think I	4	Q. That would be important in an
5	have it right here.	5	experiment of this nature, would you not
6	MS. BOCKUS: These are just	6	agree with that?
7	general questions that I'm going to	7	MS. O'DELL: Object to the
8	ask you.	8	form.
9	MS. O'DELL: You still may get	9	A. Well, he did utilize normal and
10	the paper out.	10	cancerous cells, which would theoretically
11	MS. BOCKUS: Do whatever you	11	act as a control in that experiment.
12	want to do.	12	BY MS. BOCKUS:
13	THE WITNESS: You can go ahead.	13	Q. That's not my question. I'm
14	I'm	14	really asking about another element that he
15	BY MS. BOCKUS:	15	is exposing the cells to, both the normal and
16	Q. What controls did Saed use?	16	the cancerous cells.
17	Did he use any controls? In other words, did	17	MS. O'DELL: Objection to form.
18	he place a known foreign object that was	18	BY MS. BOCKUS:
19	not that was known not to be a carcinogen	19	Q. To see if the reaction was just
20	on the cultured ovarian cells to see if there	20	a reaction to a foreign body versus talc
21	was a difference?	21	specifically.
22	MS. O'DELL: Can you just pause	22	Did he do that?
23	just for a minute, let the doctor pull	23	MS. O'DELL: Object to the
	out the exhibit?	24	form.
24	out the exhibit:	44	101111.

	Page 318		Page 320
1	A. I don't believe that he	1	A. I don't specifically know.
2	provided a control exposure as part of this	2	BY MS. BOCKUS:
3	experiment.	3	Q. There's no way to know that, is
4	BY MS. BOCKUS:	4	there?
5	Q. And you would agree that there	5	A. No, there's not.
6	are many things that will increase a CA-125,	6	Q. Let me find my there we go.
7	correct?	7	The Saed paper that you were
8	MS. O'DELL: Object to the	8	looking at just a minute ago, it has
9	form.	9	something printed across it. What does that
10	A. Yes, it's an acute-phase	10	say?
11	reactant.	11	A. In blue here?
12	BY MS. BOCKUS:	12	Q. Uh-huh.
13	Q. Pregnancy can increase	13	A. "For Peer Review."
14	somebody's CA-125?	14	Q. Okay. So it hasn't yet been
15	A. That's correct.	15	peer reviewed; is that correct?
16	Q. And with regard to the SNPs,	16	MS. O'DELL: Object to the
17	that is not the same thing as a test showing	17	form.
18	mutation, correct?	18	A. It's been submitted.
19	MS. O'DELL: Object to the	19	BY MS. BOCKUS:
20	form.	20	Q. So does that mean it has not
21	BY MS. BOCKUS:	21	yet been peer reviewed?
22	Q. It's a surrogate.	22	MS. O'DELL: Object to the
23	A. Well, it's because there was	23	form.
24	transcribed RNA that was used to determine	24	A. I think it's been accepted for
	Page 319		Page 321
1	their presence, and the it's just part of	1	publication.
2	their procedure, but it identifies genetic	2	BY MS. BOCKUS:
3	alterations. And those genetic alterations	3	Q. But the copy you have says on
4	transformed into differential enzyme	4	it "For Peer Review," correct?
5	activities.	5	A. That's correct.
6	Q. Do you know whether there are	6	Q. In the paragraph that we were
7	standard tests for genotoxicity and	_	
	<del>-</del>	7	looking at earlier, where you were talking
8	mutagenicity?	8	looking at earlier, where you were talking about the startling regularity, later on in
9	<del>-</del>	8 9	looking at earlier, where you were talking about the startling regularity, later on in the paragraph you state that there
9	mutagenicity?  A. There are lots of standard tests, yes.	8 9 10	looking at earlier, where you were talking about the startling regularity, later on in the paragraph you state that there is clearly sufficient particulate
9 10 11	mutagenicity?  A. There are lots of standard tests, yes.  Q. And Saed didn't use any of	8 9 10 11	looking at earlier, where you were talking about the startling regularity, later on in the paragraph you state that there is clearly sufficient particulate materials applied routinely to the perineum
9 10 11 12	mutagenicity? A. There are lots of standard tests, yes. Q. And Saed didn't use any of those, did he?	8 9 10 11 12	looking at earlier, where you were talking about the startling regularity, later on in the paragraph you state that there is clearly sufficient particulate materials applied routinely to the perineum have ready access and in sufficient
9 10 11 12 13	mutagenicity?  A. There are lots of standard tests, yes.  Q. And Saed didn't use any of those, did he?  MS. O'DELL: Object to the	8 9 10 11 12 13	looking at earlier, where you were talking about the startling regularity, later on in the paragraph you state that there is clearly sufficient particulate materials applied routinely to the perineum have ready access and in sufficient quantities to produce biologic responses in
9 10 11 12 13 14	mutagenicity?  A. There are lots of standard tests, yes.  Q. And Saed didn't use any of those, did he?  MS. O'DELL: Object to the form.	8 9 10 11 12 13 14	looking at earlier, where you were talking about the startling regularity, later on in the paragraph you state that there is clearly sufficient particulate materials applied routinely to the perineum have ready access and in sufficient quantities to produce biologic responses in internal tissues.
9 10 11 12 13 14 15	mutagenicity?  A. There are lots of standard tests, yes.  Q. And Saed didn't use any of those, did he?  MS. O'DELL: Object to the form.  A. Well, he went directly to cells	8 9 10 11 12 13 14	looking at earlier, where you were talking about the startling regularity, later on in the paragraph you state that there is clearly sufficient particulate materials applied routinely to the perineum have ready access and in sufficient quantities to produce biologic responses in internal tissues.  What internal tissues have you
9 10 11 12 13 14 15	mutagenicity?  A. There are lots of standard tests, yes.  Q. And Saed didn't use any of those, did he?  MS. O'DELL: Object to the form.  A. Well, he went directly to cells in culture to see what happened when they	8 9 10 11 12 13 14 15	looking at earlier, where you were talking about the startling regularity, later on in the paragraph you state that there is clearly sufficient particulate materials applied routinely to the perineum have ready access and in sufficient quantities to produce biologic responses in internal tissues.  What internal tissues have you seen any study recording a biologic response
9 10 11 12 13 14 15 16	mutagenicity? A. There are lots of standard tests, yes. Q. And Saed didn't use any of those, did he? MS. O'DELL: Object to the form. A. Well, he went directly to cells in culture to see what happened when they were treated with talc.	8 9 10 11 12 13 14 15 16 17	looking at earlier, where you were talking about the startling regularity, later on in the paragraph you state that there is clearly sufficient particulate materials applied routinely to the perineum have ready access and in sufficient quantities to produce biologic responses in internal tissues.  What internal tissues have you seen any study recording a biologic response to talc from?
9 10 11 12 13 14 15 16 17	mutagenicity? A. There are lots of standard tests, yes. Q. And Saed didn't use any of those, did he? MS. O'DELL: Object to the form. A. Well, he went directly to cells in culture to see what happened when they were treated with talc. BY MS. BOCKUS:	8 9 10 11 12 13 14 15 16 17	looking at earlier, where you were talking about the startling regularity, later on in the paragraph you state that there is clearly sufficient particulate materials applied routinely to the perineum have ready access and in sufficient quantities to produce biologic responses in internal tissues.  What internal tissues have you seen any study recording a biologic response to talc from?  That was such a bad question,
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9 10 11 12 13 14 15 16 17 18 19 20 21 22	mutagenicity?  A. There are lots of standard tests, yes.  Q. And Saed didn't use any of those, did he?  MS. O'DELL: Object to the form.  A. Well, he went directly to cells in culture to see what happened when they were treated with talc.  BY MS. BOCKUS:  Q. Does the amount of talc that Saed used compare in any way to the amount of talc that may reach a woman's ovary from perineal application?	8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	looking at earlier, where you were talking about the startling regularity, later on in the paragraph you state that there is clearly sufficient particulate materials applied routinely to the perineum have ready access and in sufficient quantities to produce biologic responses in internal tissues.  What internal tissues have you seen any study recording a biologic response to talc from?  That was such a bad question, I'm going to ask it again.  What internal tissues are you referring to there?  A. Well, it says including
9 10 11 12 13 14 15 16 17 18 19 20 21	mutagenicity?  A. There are lots of standard tests, yes.  Q. And Saed didn't use any of those, did he?  MS. O'DELL: Object to the form.  A. Well, he went directly to cells in culture to see what happened when they were treated with talc.  BY MS. BOCKUS:  Q. Does the amount of talc that Saed used compare in any way to the amount of talc that may reach a woman's ovary from	8 9 10 11 12 13 14 15 16 17 18 19 20 21	looking at earlier, where you were talking about the startling regularity, later on in the paragraph you state that there is clearly sufficient particulate materials applied routinely to the perineum have ready access and in sufficient quantities to produce biologic responses in internal tissues.  What internal tissues have you seen any study recording a biologic response to talc from?  That was such a bad question, I'm going to ask it again.  What internal tissues are you referring to there?

	Page 322		Page 324
1	the fallopian fimbriae and the epithelium of	1	fallopian tube goes into that fluid and just
2	the cavity.	2	gets moved around all the time; is that
3	Q. So and I know we've been	3	correct?
4	through this already, but to your knowledge,	4	MS. O'DELL: Objection. Excuse
5	there are no studies reporting biologic	5	me. Objection, form.
6	responses to talc in the vagina, correct?	6	A. Well, there's a fairly direct
7	A. Not that I'm aware.	7	presentation of the ovary, so there's not a
8	Q. You're not aware of any studies	8	large space there, but there is a space. And
9	reporting biologic responses to talc in the	9	whatever goes into that space remains there.
10	cervix, correct?	10	Some of it may come back out.
11	A. Correct.	11	BY MS. BOCKUS:
12	Q. Are you aware of any studies	12	Q. Does the fallopian tube move
13	reporting biologic response to the uterus?	13	around during the month?
14	A. No.	14	MS. O'DELL: Object to the
15	Q. Are you aware of any studies	15	form.
16	reporting a biologic response in the	16	A. I don't know.
17	fallopian tubes?	17	MS. BOCKUS: I'm almost
18	MS. O'DELL: Object to the	18	finished. I'm going through all the
19	form.	19	things that I've crossed off.
20	A. Well, I don't I'm not aware	20	BY MS. BOCKUS:
21	of studies that draws a direct correlation	21	Q. So I understand you correctly,
22	between exposure to talc and reaction in the	22	you have not identified a nonthreshold dose
23	fallopian tubes.	23	of tale; is that correct?
24		24	MS. O'DELL: Object to the
	Page 323		Page 325
1	BY MS. BOCKUS:	1	form.
2	Q. Okay. Is the ovary attached to	2	A. You mean a dose that is below a
3	the fallopian tube?	3	safe threshold?
1	A It is it is in the magazine iter	_	
4	A. It is it's in the proximity.	4	BY MS. BOCKUS:
5	It's not directly attached.	5	BY MS. BOCKUS: Q. Correct.
5 6	It's not directly attached.  Q. And what surrounds the ovary?	5 6	BY MS. BOCKUS: Q. Correct. A. No, I have not.
5 6 7	It's not directly attached.  Q. And what surrounds the ovary?  A. There's a structure that the	5 6 7	BY MS. BOCKUS: Q. Correct. A. No, I have not. Q. Did you make any attempt to
5 6 7 8	It's not directly attached.  Q. And what surrounds the ovary?  A. There's a structure that the ovary itself?	5 6 7 8	BY MS. BOCKUS: Q. Correct. A. No, I have not. Q. Did you make any attempt to extrapolate a de minimis risk level?
5 6 7 8 9	It's not directly attached.  Q. And what surrounds the ovary?  A. There's a structure that the ovary itself?  Q. Yes.	5 6 7 8 9	BY MS. BOCKUS: Q. Correct. A. No, I have not. Q. Did you make any attempt to extrapolate a de minimis risk level? MS. O'DELL: Object to the
5 6 7 8 9 10	It's not directly attached.  Q. And what surrounds the ovary?  A. There's a structure that the ovary itself?  Q. Yes.  A. There's an epithelial membrane	5 6 7 8 9	BY MS. BOCKUS: Q. Correct. A. No, I have not. Q. Did you make any attempt to extrapolate a de minimis risk level? MS. O'DELL: Object to the form.
5 6 7 8 9 10 11	It's not directly attached.  Q. And what surrounds the ovary?  A. There's a structure that the ovary itself?  Q. Yes.  A. There's an epithelial membrane around the ovary, and	5 6 7 8 9 10 11	BY MS. BOCKUS: Q. Correct. A. No, I have not. Q. Did you make any attempt to extrapolate a de minimis risk level? MS. O'DELL: Object to the form. A. I did not. It would be nice to
5 6 7 8 9 10 11	It's not directly attached.  Q. And what surrounds the ovary?  A. There's a structure that the ovary itself?  Q. Yes.  A. There's an epithelial membrane around the ovary, and  Q. And then what touches the	5 6 7 8 9 10 11	BY MS. BOCKUS: Q. Correct. A. No, I have not. Q. Did you make any attempt to extrapolate a de minimis risk level? MS. O'DELL: Object to the form. A. I did not. It would be nice to be able to do that, considering that most of
5 6 7 8 9 10 11 12 13	It's not directly attached.  Q. And what surrounds the ovary?  A. There's a structure that the ovary itself?  Q. Yes.  A. There's an epithelial membrane around the ovary, and  Q. And then what touches the epithelial membrane?	5 6 7 8 9 10 11 12	BY MS. BOCKUS: Q. Correct. A. No, I have not. Q. Did you make any attempt to extrapolate a de minimis risk level? MS. O'DELL: Object to the form. A. I did not. It would be nice to be able to do that, considering that most of us have had talcum powder exposures of one
5 6 7 8 9 10 11 12 13	It's not directly attached.  Q. And what surrounds the ovary?  A. There's a structure that the ovary itself?  Q. Yes.  A. There's an epithelial membrane around the ovary, and  Q. And then what touches the epithelial membrane?  A. Well, the fimbriae of the	5 6 7 8 9 10 11 12 13	BY MS. BOCKUS: Q. Correct. A. No, I have not. Q. Did you make any attempt to extrapolate a de minimis risk level? MS. O'DELL: Object to the form. A. I did not. It would be nice to be able to do that, considering that most of us have had talcum powder exposures of one sort or another during our lives. And it's
5 6 7 8 9 10 11 12 13 14 15	It's not directly attached.  Q. And what surrounds the ovary?  A. There's a structure that the ovary itself?  Q. Yes.  A. There's an epithelial membrane around the ovary, and  Q. And then what touches the epithelial membrane?  A. Well, the fimbriae of the fallopian tubes surround that and the rest of	5 6 7 8 9 10 11 12 13 14	Part MS. BOCKUS: Q. Correct. A. No, I have not. Q. Did you make any attempt to extrapolate a de minimis risk level? MS. O'DELL: Object to the form. A. I did not. It would be nice to be able to do that, considering that most of us have had talcum powder exposures of one sort or another during our lives. And it's something that seems to have been felt to be
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	Arch 1. Chip Co		, M.D., FII.D.
	Page 326		Page 328
1	A. Well, we'd need we'd need	1	you? In other words, are they referred by
2	dose information, first of all, which we	2	other people?
3	don't have, to combine with the epidemiologic	3	A. I have primarily a referral
4	results.	4	practice in toxicology.
5	We need to define the	5	Q. In toxicology? And so what
6	mechanistic issues better than they are	6	types of patients are referred to you?
7	currently, and at that point I think we would	7	A. I have patients who are either
8	be able to make some strong conclusions	8	workplace-related patients who have had
9	regarding potential thresholds of hazardous	9	chemical or other substance exposures. I
10	doses.	10	also have a number of environmental exposure
11	Q. You would agree that the great	11	patients that I see.
12	majority of women who use talcum powder on a	12	And I also have a number of
13	regular basis are never diagnosed with	13	I also see a number of patients for general
14	ovarian cancer, correct?	14	routine surveillance activities or required
15		15	*
			exams by regulation, either for licensure or
16	Q. And it's also true that the	16	certification.
17	majority of women diagnosed with ovarian	17	Q. Are you sent patients where the
18	cancer have never used talcum powder on a	18	patient is trying to figure out why they got
19	regular basis, correct?	19	some disease?
20	MS. O'DELL: Object to the	20	A. Sometimes. Usually the patient
21	form.	21	comes and tells me why they got the disease,
22	A. I think it's a majority, but	22	and I go I talk to them about the
23	there's a significant number who have.	23	possibilities, and we look at ways of
24	///	24	confirming that or refuting it, or in many
	Page 327		Page 329
1	BY MS. BOCKUS:	1	cases, altering to a correct path of
2	Q. But the majority have not,	2	diagnostic investigation.
3	correct?	3	Q. So sometimes a patient comes to
4	A. I would say more than 50% have	4	you and says: I was exposed to this chemical
5	not.	5	and that's why I can't breathe?
6	Q. And would you agree that let	6	A. Yes.
7	me back up.	7	Q. And you do an investigation,
8	When is the last time you	8	and sometimes you say: You know what, that
9	conducted a pelvic exam?	9	chemical has nothing to do with why you can't
10	A. I haven't done one in a couple	10	breathe?
11	of years.	11	A. Sometimes that's the case.
12	Q. Under what circumstances did	12	MS. O'DELL: Are you finished,
13	you do it two years ago?	13	sir? Are you finished?
14	A. I see patients regularly, and	14	A. Well, I just wanted to add
15	in some cases, pelvic exams are either	15	BY MS. BOCKUS:
16	requested or indicated by the issue.	16	Q. Sure.
17	Q. It's not something you do on a	17	A that although many times it
18	regular basis, correct?	18	is the case, and often the patient does
Τ 0	A. It's not.	19	understand that connection quite well,
10	Δ H S TIOL	1	
19 20		20	ugually from a yarr alcoaly compacted correct
20	Q. And you do not what	20	usually from a very closely connected cause
20 21	Q. And you do not what percentage of your patients are women?	21	and effect kind of relationship. It's when
20 21 22	<ul><li>Q. And you do not what</li><li>percentage of your patients are women?</li><li>A. Probably half, maybe a little</li></ul>	21 22	and effect kind of relationship. It's when things are stretched out much more in time,
20 21 22 23	<ul><li>Q. And you do not what percentage of your patients are women?</li><li>A. Probably half, maybe a little less than half.</li></ul>	21 22 23	and effect kind of relationship. It's when things are stretched out much more in time, and there is a likely suspect that may be an
20 21 22	<ul><li>Q. And you do not what</li><li>percentage of your patients are women?</li><li>A. Probably half, maybe a little</li></ul>	21 22	and effect kind of relationship. It's when things are stretched out much more in time,

1 confused. 2 Q. Have you ever been referred a patient to determine why they have ovarian cancer? 3 patient to determine why they have ovarian cancer? 4 Live seen odds ratios or relative risks all the way from 1 or even below to very hone of hone of the way from 1 or even below to very hone of hone of the way from 1 or even below to very hone of hone of hone of the way from 1 or even below to very hone of hone o
Q. Have you ever been referred a patient to determine why they have ovarian cancer?  A. No.  Q. Do you know of any methodology cacepted in the medical community for determining why an individual woman has developed ovarian cancer?  MS. O'DELL: Object to the for that might identify other known risk factors for that woman, there is any good or prescribed that there is any good or prescribed there is no reasonable screening test that can find that cancer when it is at an early stage.  Q. Have you ever been referred a the research study that has been done, be there research study that has been done, be the e research study that has been done, be the way from I or even below to very he numbers, like 20 to 50.  Q. 20.0, is that what you're saying?  A. Yes, 20.0.  Q. Not 1.2, but 20.0?  A. Which is a which would be times the normal risk without the expose that there is any good or prescribed  P. Okay. So we've got obesity at heavy exposure to asbestos. Any other factors that you're familiar with?  MS. O'DELL: Objection excuse me. Objection, misstates the doctor's testimony.  You may answer.  THE WITNESS: Okay.
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5 A. No. 6 Q. Do you know of any methodology 7 accepted in the medical community for 8 determining why an individual woman has 9 developed ovarian cancer? 10 MS. O'DELL: Object to the 11 form. 12 A. Other than genetic testing that 13 identifies specific risks and history taking 14 that might identify other known risk factors 15 for that woman, there is I don't believe 16 that there is any good or prescribed 17 procedure for making that determination, and 18 there is no reasonable screening test that 19 can find that cancer when it is at an early 20 stage. 21 BY MS. BOCKUS: 22 Q. Do you believe that obesity 23 causes ovarian cancer? 2
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23 causes ovarian cancer? 23 A. Other risk factors for ovarian
A. It certainly seems to be 24 cancer would include things like early
A. It certainly seems to be 24 cancer would include things like early
Page 331 Page 3
1 related to the occurrence of ovarian cancer 1 menarche, late menopause, never being
2 from a statistical point of view. 2 pregnant. These are some of the more com-
Q. What is the increase in a risk factors that are identified.
4 woman's risk of ovarian cancer if she's obese 4 There are genetic risk factors
5 compared to a nonobese woman? 5 that are known, like the BRCA mutations,
6 A. In terms of numbers? 6 which confer an increased risk. Family
7 Q. Yes, sir. 7 history.
8 A. I don't know the I don't 8 BY MS. BOCKUS:
DI MD. DOCKOD.
9 know the numbers. 9 Q. Do you know the odds ratios of
9 know the numbers. 9 Q. Do you know the odds ratios of 10 Q. What other risk factors are you 10 any of the risk factors that you just
9 know the numbers. 9 Q. Do you know the odds ratios of 10 Q. What other risk factors are you 10 any of the risk factors that you just 11 identified of never having children, having
9 know the numbers. 9 Q. Do you know the odds ratios of 10 Q. What other risk factors are you 11 familiar with for ovarian cancer? 11 identified of never having children, having 12 A. Well, certainly work with 12 early menarche or late menopause?
9 Q. Do you know the odds ratios of 10 Q. What other risk factors are you 11 familiar with for ovarian cancer? 12 A. Well, certainly work with 13 asbestos is a risk factor, and we have a 19 Q. Do you know the odds ratios of 10 any of the risk factors that you just 11 identified of never having children, having 12 early menarche or late menopause? 13 A. Right offhand, I don't know
9 Q. Do you know the odds ratios of 10 Q. What other risk factors are you 11 familiar with for ovarian cancer? 12 A. Well, certainly work with 13 asbestos is a risk factor, and we have a 14 number of studies that have shown women  9 Q. Do you know the odds ratios of any of the risk factors that you just identified of never having children, having early menarche or late menopause? A. Right offhand, I don't know what those odds ratios the range of those
9  Q. Do you know the odds ratios of 10 Q. What other risk factors are you 11 familiar with for ovarian cancer? 12 A. Well, certainly work with 13 asbestos is a risk factor, and we have a 14 number of studies that have shown women 15 working in the asbestos industry or women who 16 Q. Do you know the odds ratios of 17 any of the risk factors that you just 18 identified of never having children, having 19 any of the risk factors that you just 10 any of the risk factors that you just 11 identified of never having children, having 12 early menarche or late menopause? 13 A. Right offhand, I don't know 14 what those odds ratios the range of those 15 are.
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9
9
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1	But also, some of these risk	1	Q. So you think you just ran into
2	factors are so common in the population that	2	her?
3	we can concoct large cohort studies that will	3	A. Yeah.
4	have can have very low relative risks,	4	Q. The other people that you
5	like on the order of 1.3 or even lower, and	5	identified that you discussed your report
6	still a significant result.	6	with, did you ask them to read your report?
7	So the more common a factor is,	7	A. I asked them to look at parts
8	the easier it is to do the research and the	8	of it, early drafts of it to let me know if
9	more likely you'll get a finding that's	9	they thought I was making sense.
10	relevant to interpretation.	10	Q. And did they offer you comments
11	Q. What pushes a talc particle	11	and suggestions for changes in your paper?
12	from the perineum into the vagina?	12	A. Not really. Mostly they gave
13	A. Probably mostly the law of mass	13	me a pat on the back and said: I think
14	action. It simply goes of its own volition.	14	you're doing a good job, just sort of beef
15	These small particles are always in motion	15	this part up, and what do you mean by this,
16	through molecular forces, and they simply	16	maybe I could rephrase that. That sort of
17	move in all directions, and some of them move	17	thing.
18	in that direction.	18	Q. Did they give you written
19	Q. Would that be true for any	19	suggestions?
20	small particles applied to a woman's	20	A. No, these were all verbal
21	perineum?	21	comments.
22	A. Yes.	22	Q. Had you given them a hard copy
23	Q. Are you board certified in	23	of the portions of your report that you
24	medical toxicology?	24	wanted them to comment on?
	Page 335		Page 337
1	Page 335  A. I'm not. I started practicing	1	Page 337 A. Yes.
1 2		1 2	
	A. I'm not. I started practicing		A. Yes.
2	A. I'm not. I started practicing medical toxicology before there was a board	2	A. Yes. Q. And they didn't redline it or
2 3	A. I'm not. I started practicing medical toxicology before there was a board in the specialty, and I've been grandfathered	2 3	A. Yes. Q. And they didn't redline it or make draw arrows or anything like that for
2 3 4	A. I'm not. I started practicing medical toxicology before there was a board in the specialty, and I've been grandfathered into the profession as a member of the American College of Medical Toxicology.  Q. How long did you talk to	2 3 4	A. Yes. Q. And they didn't redline it or make draw arrows or anything like that for you? A. I think actually George Delclos did draw some or make some notes on there
2 3 4 5	A. I'm not. I started practicing medical toxicology before there was a board in the specialty, and I've been grandfathered into the profession as a member of the American College of Medical Toxicology.  Q. How long did you talk to Dr. Ness about her paper?	2 3 4 5	A. Yes. Q. And they didn't redline it or make draw arrows or anything like that for you? A. I think actually George Delclos
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. I'm not. I started practicing medical toxicology before there was a board in the specialty, and I've been grandfathered into the profession as a member of the American College of Medical Toxicology.  Q. How long did you talk to Dr. Ness about her paper?  A. About her paper, probably a minute and a half. About all kinds of other things, for a while.  Q. What other kinds of things?  A. Mostly personal things that had nothing to do with talc or this case.  Q. How long do you think that conversation was?  A. Well, with Dr. Ness, nothing lasts very long, so I would say ten minutes at the most.  Q. Okay. Did you call her?  A. No. She's she comes and goes in the same building where I office, and my office is just on the opposite side of the	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. Yes. Q. And they didn't redline it or make draw arrows or anything like that for you? A. I think actually George Delclos did draw some or make some notes on there and hand it back to me, and I incorporated those into my electronic version. Q. Do you still have George's notes to you? A. No, I don't. Q. Is he the only one out of the people that you asked to look at it who gave you handwritten notes? A. Yes, I think so. Q. Have you seen the term "intrinsic elimination system" regarding the ovary in any of the publications that you've read? A. I don't know, I may have. Q. Can you think of one in particular that discusses that characteristic

	Page 338		Page 340
1	discuss migration to the ovary. It would	1	that?
2	probably be a talc paper, though. I don't	2	A. Well, I saw this actually when
3	recall seeing it anywhere.	3	I first started this process, and I think
4	Q. Did you consult any gynecologic	4	Dr. Longo was involved in that activity,
5	textbooks?	5	where they modeled the the application of
6	A. No, I didn't. I may have	6	talcum powder and did some calculations based
7	looked at some diagrams on the Internet.	7	on the amount of substance that was used, and
8	Q. Okay. Did you consult any	8	they measured it in things like shakes and
9	gynecologic oncology textbooks?	9	and then quantified the amount that was lost
10	A. Not textbooks, no.	10	from the container to determine what an
11	Q. Do you know the position of the	11	application amount was.
12	Society of Gynecologic Oncologists on the	12	I don't think they were able to
13	question of whether does talc increase a	13	go beyond that point in the modeling process.
14	woman's risk for ovarian cancer?	14	Q. You didn't see anything that
15	A. No, I don't.	15	Dr. Longo did that attempted to quantify the
16	Q. Would that be important to you	16	amount of talcum powder from a single shake
17	to know their position?	17	that ended up on a woman's perineum, did you?
18	A. No, I don't think so.	18	MS. O'DELL: Object to the
19	Q. Do you know the position of	19	form.
20	ACOG on whether the use of perineal use of	20	A. I you know, I don't know the
21	talc increases a woman's risk of ovarian	21	answer to that, simply because I don't
22	cancer?	22	recall, but I wouldn't be surprised that
23	A. I don't know that either.	23	there was an attempt made to do that. But
24	That's not something I've looked at.	24	beyond that, I don't think anything would be
	Page 339		Page 341
1	Q. Would that be important to you?	1	successful.
2	A. No.	2	These were clothed subjects, so
3	<li>Q. Do you have any scientific text</li>		
		3	that adds another factor to the calculation.
4	that suggests that an inert particle resides	3 4	that adds another factor to the calculation. BY MS. BOCKUS:
5			BY MS. BOCKUS:  Q. Is that the only experiment
	that suggests that an inert particle resides	4	BY MS. BOCKUS:  Q. Is that the only experiment that you're familiar with that you've seen
5	that suggests that an inert particle resides on the ovary longer than it does in the cervix?  A. Well, I have I have a paper	4 5	BY MS. BOCKUS:  Q. Is that the only experiment that you're familiar with that you've seen anywhere that attempts to quantify the amount
5 6 7 8	that suggests that an inert particle resides on the ovary longer than it does in the cervix?  A. Well, I have I have a paper that relates to the time for dissolution of a	4 5 6 7 8	BY MS. BOCKUS:  Q. Is that the only experiment that you're familiar with that you've seen anywhere that attempts to quantify the amount of talcum powder from a single use that ends
5 6 7 8 9	that suggests that an inert particle resides on the ovary longer than it does in the cervix?  A. Well, I have I have a paper that relates to the time for dissolution of a particle in biological fluids, which would go	4 5 6 7 8 9	BY MS. BOCKUS:  Q. Is that the only experiment that you're familiar with that you've seen anywhere that attempts to quantify the amount of talcum powder from a single use that ends up actually on a woman's perineum?
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	Page 342		Page 344
1	BY MS. BOCKUS:	1	A. Uh-huh.
2	Q. Okay. Can you tell me the	2	Q. And echoing what my colleagues
3	names of the environmental websites that have	3	have said today, if there's at any point I
4	been talking about IARC revisiting their	4	ask a question that you do not understand,
5	classification of talc?	5	just stop me and ask me to rephrase it or let
6	A. There are there are a number	6	me know otherwise, okay?
7	of Twitter feeds and websites that carry on	7	A. I will.
8	this kind of discussion. Science Interest is	8	Q. Thanks.
9	one of them. I think IARC Watch is another	9	So going back shortly to your
10	one. I have I get e-mails about some of	10	scope of work, do you teach any coursework on
11	these and end up going into them for a period	11	talc or ovarian cancer?
12	of time and seeing if they have anything	12	A. I teach some general courses.
13	interesting going on. Some of them are	13	Up until last spring I taught a general
14	searchable.	14	environmental health course for graduate
15	And then I get e-mails from the	15	students in the Master of Public Health
16	ones that I visit about other ones. So I	16	program at the School of Public Health, and
17	spend as much of my time deleting these	17	in that course we did touch on things like
18	e-mails without reading them as I do actually	18	environmental exposures that would include
19	viewing the material.	19	minerals of various varieties, but it was
20	Q. So fair to say this is just	20	very cursory.
21	chatter you've seen on the Internet in these	21	Q. And was that curriculum
22	different chat rooms or Twitter accounts that	22	specific to environmental and industrial
23	you visit from time to time?	23	products or minerals as opposed to consumer
24	A. It's all Internet based, yes.	24	products?
	Dage 3/13		Page 345
	Page 343	_	Page 345
1	MS. BOCKUS: Okay. I think	1	A. We actually did touch on other
2	MS. BOCKUS: Okay. I think that's all I have. Thank you.	2	A. We actually did touch on other consumer products as well in terms of the
2 3	MS. BOCKUS: Okay. I think that's all I have. Thank you. MS. O'DELL: Why don't we take	2 3	A. We actually did touch on other consumer products as well in terms of the significant environmental problem that we
2 3 4	MS. BOCKUS: Okay. I think that's all I have. Thank you.  MS. O'DELL: Why don't we take a short break. We've been going about	2 3 4	A. We actually did touch on other consumer products as well in terms of the significant environmental problem that we have currently, but regarding the huge
2 3 4 5	MS. BOCKUS: Okay. I think that's all I have. Thank you.  MS. O'DELL: Why don't we take a short break. We've been going about two hours.	2 3 4 5	A. We actually did touch on other consumer products as well in terms of the significant environmental problem that we have currently, but regarding the huge volume of personal care products that goes
2 3 4 5 6	MS. BOCKUS: Okay. I think that's all I have. Thank you. MS. O'DELL: Why don't we take a short break. We've been going about two hours. MR. ZELLERS: Do you have	2 3 4 5 6	A. We actually did touch on other consumer products as well in terms of the significant environmental problem that we have currently, but regarding the huge volume of personal care products that goes into our aqueous waste stream and how that's
2 3 4 5 6 7	MS. BOCKUS: Okay. I think that's all I have. Thank you.  MS. O'DELL: Why don't we take a short break. We've been going about two hours.  MR. ZELLERS: Do you have questions?	2 3 4 5 6 7	A. We actually did touch on other consumer products as well in terms of the significant environmental problem that we have currently, but regarding the huge volume of personal care products that goes into our aqueous waste stream and how that's affecting the aquatic environment as well as
2 3 4 5 6 7 8	MS. BOCKUS: Okay. I think that's all I have. Thank you.  MS. O'DELL: Why don't we take a short break. We've been going about two hours.  MR. ZELLERS: Do you have questions?  MS. APPEL: I do, but	2 3 4 5 6 7 8	A. We actually did touch on other consumer products as well in terms of the significant environmental problem that we have currently, but regarding the huge volume of personal care products that goes into our aqueous waste stream and how that's affecting the aquatic environment as well as groundwater and so forth.
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	Page 346		Page 348
1	a shared file. Is that shared file something	1	accumulating information in the draft as a
2	that you created or plaintiffs' counsel	2	result of my review of the literature.
3	created?	3	So if I had to separate things
4	A. It's something that I think	4	out, I would say that, by far, the most of
5	plaintiffs' counsel created for me to be able	5	the time has been spent in reading articles
6	to send them documents and receive documents,	6	and reviewing them and comparing them with
7	and it's a Dropbox share file. It's at	7	other articles, and a comparatively small
8	this point I think it might be mine. I'm not	8	amount of time has been spent in drafting the
9	sure just exactly who's in charge of that or	9	report.
10	runs it, but it comes directly into my	10	Although there were some
11	Dropbox file.	11	strings of activity which was all report
12	I know I had to boost my	12	drafting basically, I would say probably 85
13	subscription to Dropbox in order to hold the	13	to 90% was research, seeking articles,
14	2 gigabytes of data from that we were	14	reading them, reviewing them, and comparing
15	putting into there.	15	them.
16	Q. Is there anything from that	16	Q. And you also testified earlier
17	Dropbox file that you relied upon in forming	17	today that you discarded information not
18	your opinion in your report that you have not	18	relevant or interesting to you.
19	already provided to defense counsel?	19	How did you make that
20	A. No, everything that was in that	20	determination?
21	Dropbox that I've relied upon has been	21	MS. O'DELL: Objection to the
22	identified here.	22	form.
23	Q. Who prepared Exhibit B to your	23	A. The things that I discarded did
24	report?	24	not seem to fit into my gestalt of the
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	Page 347		Page 349
1	Page 347  A. Exhibit B was a list of	1	Page 349 understanding of this question and the
1 2		1 2	
	A. Exhibit B was a list of		understanding of this question and the
2	A. Exhibit B was a list of articles from the research literature	2	understanding of this question and the opinions that I wanted to express. They may have been interesting information and useful for some purposes, but not for this
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2 3 4	A. Exhibit B was a list of articles from the research literature included in the Dropbox that that I think does not I don't know whether it includes the referenced articles from my report or not, but they were all part of the same	2 3 4	understanding of this question and the opinions that I wanted to express. They may have been interesting information and useful for some purposes, but not for this
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cancer; is that correct?  A. Not knowingly, not because of ovarian cancer.  Q. Have you ever diagnosed any patients with ovarian cancer?  A. I think when I was in medical school or residency, I probably participated in that on several patients.  Q. Have you ever instructed a patient not to use talcum powder products?  A. I hand't up until a month or two ago, but I've been asking people about — a about their talcum powder use just as sort of a curiosity in mentioning that there might be a risk.  Q. Do you ask that of all your patients?  A. I would say no, I don't usually ask the men that, but I probably should a to inform your opinions in thic scase?  A. I don't think so. There have  Page 351  been very few that I have asked that question in the last month or so. I've had a limited clinic schedule during this period of time.  We had the holidays and other things, so I haven't see that many patients.  And of those women that are using — have told you that they have used using — have told you that they have used talcum powder, are those women diagnosed with ovarian cancer?  A. No.  Q. So suffice to say the inquiry of the patients of your female patients of the women have had a history of using talcum powder.  A. No.  Q. And of those women that are using — have told you that they have used talcum powder, are those women diagnosed with ovarian cancer?  A. No.  Q. So suffice to say the inquiry of the patients of your female patients or the pati		Page 350		Page 352
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	Page 354		Page 356
1	based on research that has been done on	1	classified by IARC.
2	available talcum powder products, so I guess	2	BY MS. APPEL:
3	the research would have been done using some	3	Q. But it's your opinion that a
4	small quantity of asbestos in all of those	4	possible carcinogen strike that.
5	studies.	5	It's your opinion that any dose
6	BY MS. APPEL:	6	of a possible carcinogen can cause cancer?
7	Q. You also testified today,	7	MS. O'DELL: Objection to form.
8	Dr. Carson, that you have found in your	8	A. Yes, I think there is a
9	research that there is a dose-response	9	potential for any dose of a carcinogen to
10	relationship between talcum powder products	10	cause a cancer. There's also the principle
11	and ovarian cancer, correct?	11	that the lower the dose, the less likely it
12	A. Well, a number of the research	12	is, the lower the risk is for developing a
13	studies, the epidemiology studies have shown	13	cancer.
14	positive and statistically significant	14	BY MS. APPEL:
15	trends.	15	Q. And your opinion extends to
16	Q. And those trends that you're	16	those particles that have not been identified
17	relying on, Dr. Carson, actually only relate	17	as carcinogens, but may just be possible
18	to duration and frequency, correct?	18	carcinogens?
19	MS. O'DELL: Objection to form.	19	A. I think talc has been
20	A. Yes, they do relate to duration	20	identified as a carcinogen.
21	and frequency, which is the only surrogate we	21	Q. So you disagree with the IARC
22	have for dose.	22	classification?
23	BY MS. APPEL:	23	A. The IARC 2B classification is a
24	Q. So in forming your opinion,	24	carcinogenic classification.
20	Page 355		Page 357
1	Dr. Carson, you have not determined a level	1	Q. But you recognize and that
2	of harmful exposure to talcum powder products	2	there are different types of categories that
3	that causes ovarian cancer?	3	IARC has?
4	A. That's correct.	4	A. Yes.
5	Q. And you did not conduct a dose	5	Q. And that it's that tale that
6	assessment between talcum powder products and	6	does not contain asbestos was not, in fact,
7	ovarian cancer, correct?	7	categorized as a Group 1, correct?
8	MS. O'DELL: Objection to form.	8	A. That's correct.
9	A. Well, I did not conduct a	9	Q. So is it your opinion, then,
10	dose-response, but I am of the opinion that	10	looking at other 2B-classified particles by
11	there's no safe threshold for exposure to a	11	IARC, that any exposure to pickled vegetables
12	carcinogen until such a threshold is	12	would cause cancer?
13	identified.	13	A. We know that there are a number
14	BY MS. APPEL:	14	of carcinogens that are regularly present in
15	Q. And does that include	15	things like the food that we eat. We have a
16	Category 2B particles as well	16	rule that says that those things should not
17	MS. O'DELL: Objection.	17	be included in food items unless they have
18	BY MS. APPEL:	18	passed a particular exemption process.
19	Q that it's a possible	19	Pickled vegetables are
20	carcinogen?	20	something that people have been familiar with
21	MS. O'DELL: Objection to form.	21	and have been using for hundreds of years,
22	A. It includes the talc that was	22	and things like talcum powder are things that
23	discussed in the IARC report. Those	23 24	have been used for well, at least a hundred years, but probably considerably
24	conclusions have nothing to do with how it's	. 44	nunured years, but probably considerably
	concresions have nothing to do with now its		

	Page 358		Page 360
1	longer.	1	A. Pickled vegetables.
2	And whether or not those things	2	Q I had was pickled
3	are carcinogens, there are people who still	3	vegetables, and the question was whether or
4	find enough value to offset that factor in	4	not is your opinion that any consumption of
5	their own lives and they can make their own	5	pickled vegetables causes cancer?
6	decisions regarding their exposure.	6	MS. O'DELL: Objection to form.
7	It's a similar concept to	7	A. I believe the primary form of
8	people who choose to smoke. Although smoking	8	cancer that's potentially related with
9	is an addictive behavior, people are aware	9	pickled vegetables is stomach cancer, and
10	that it causes disease, including cancer, and	10	there is a slight increase in risk with
11	yet they continue to smoke.	11	consumption of pickled vegetables for
12	We continue to eat grilled	12	everybody who does it.
13	meats, even most of us know now that	13	BY MS. APPEL:
14	grilled meats contain polycyclic aromatic	14	Q. Okay. And what about gasoline
15	hydrocarbons that are known carcinogens, some	15	or exhaust?
16	of them Group 1 carcinogens, and yet, we	16	A. Gasoline meaning the fuel?
17	continue that practice and revel in it even.	17	Q. Yes.
18	That's just part of what we do as human	18	A. Well, gasoline used to contain
19	beings.	19	a significant amount of benzene, which was
20	The issue with talc is a	20	a determined to be a carcinogenic
21	complicated question in my mind. I think I'm	21	substance. In recent years, most of the
22	straying a bit from your from your	22	benzene has been removed from gasoline, so
23	question, but baby powder, for example, is	23	now there's very little benzene in vapors
24	something that has a very very dear sort	24	that are expressed.
	Page 359		Page 361
1		1	
1 2	of relationship to many people.	1 2	But there's a small amount. So
	of relationship to many people.  The experience with that from		But there's a small amount. So when you inhale gasoline vapors, you are also
2	of relationship to many people.	2	But there's a small amount. So
2	of relationship to many people.  The experience with that from the time you were a baby until you grow up	2	But there's a small amount. So when you inhale gasoline vapors, you are also exposing yourself to a very small amount of a
2 3 4	of relationship to many people.  The experience with that from the time you were a baby until you grow up and have your own children involves a lot of	2 3 4	But there's a small amount. So when you inhale gasoline vapors, you are also exposing yourself to a very small amount of a carcinogenic substance.
2 3 4 5	of relationship to many people.  The experience with that from the time you were a baby until you grow up and have your own children involves a lot of the use of baby powder in many, many	2 3 4 5	But there's a small amount. So when you inhale gasoline vapors, you are also exposing yourself to a very small amount of a carcinogenic substance.  As far as exhaust is concerned,
2 3 4 5 6	of relationship to many people.  The experience with that from the time you were a baby until you grow up and have your own children involves a lot of the use of baby powder in many, many households. That's a difficult relationship	2 3 4 5 6	But there's a small amount. So when you inhale gasoline vapors, you are also exposing yourself to a very small amount of a carcinogenic substance.  As far as exhaust is concerned, diesel exhaust in particular has contains
2 3 4 5 6 7	of relationship to many people.  The experience with that from the time you were a baby until you grow up and have your own children involves a lot of the use of baby powder in many, many households. That's a difficult relationship to break. It's psychological as much as it	2 3 4 5 6 7	But there's a small amount. So when you inhale gasoline vapors, you are also exposing yourself to a very small amount of a carcinogenic substance.  As far as exhaust is concerned, diesel exhaust in particular has contains particles that have been identified through
2 3 4 5 6 7 8	of relationship to many people.  The experience with that from the time you were a baby until you grow up and have your own children involves a lot of the use of baby powder in many, many households. That's a difficult relationship to break. It's psychological as much as it is knowledge based.	2 3 4 5 6 7 8	But there's a small amount. So when you inhale gasoline vapors, you are also exposing yourself to a very small amount of a carcinogenic substance.  As far as exhaust is concerned, diesel exhaust in particular has contains particles that have been identified through various bioassays to be carcinogenic. So
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1	was thinking of the Saed paper.	1	CERTIFICATE
2	Q. Okay. Last question: Counsel	2	I, MICHAEL E. MILLER, Fellow of the Academy of Professional Reporters,
3	was asking you about the migration process,	3	Registered Diplomate Reporter, Certified
4	and you mentioned that in the course of	4	Realtime Reporter, Certified Court Reporter and Notary Public, do hereby certify that
5	particles moving up the track, that some of	5	prior to the commencement of the examination, ARCH I. "CHIP" CARSON, M.D., Ph.D. was duly
6	it may come back out even after it reaches	6	sworn by me to testify to the truth, the whole truth and nothing but the truth.
7	the fluid surrounding the ovaries, correct?	7	I DO FURTHER CERTIFY that the
8	A. Yes.	8	foregoing is a verbatim transcript of the testimony as taken stenographically by and
9		9	before me at the time, place and on the date hereinbefore set forth, to the best of my
10	Q. So if particles have the		ability.
	ability to come back out, that means that	10	I DO FURTHER CERTIFY that pursuant
11	there is, in fact, some form of an intrinsic	11	to FRCP Rule 30, signature of the witness was not requested by the witness or other party
12	elimination system.	12	before the conclusion of the deposition.
13	A. Well, if this is all based on	13	I DO FURTHER CERTIFY that I am neither a relative nor employee nor attorney
14	mass action, it would not necessarily be an	14	nor counsel of any of the parties to this action, and that I am neither a relative nor
15	intrinsic elimination system, and I believe	15	employee of such attorney or counsel, and
16	that talc particles, once they produce an	16	that I am not financially interested in the action.
17	inflammatory response, they become	17 18	
18	sequestered within that inflammatory milieu	19	MICHAEL E. MILLER, FAPR, RDR, CRR Fellow of the Academy of Professional Reporters
19	and no longer are available for movement back		NCRA Registered Diplomate Reporter
20	out into the fluid.	20	NCRA Certified Realtime Reporter Certified Court Reporter
21	I'm sure there's some small	21	Notary Public in and for the
22	percentage of them that are an exception to	22	State of Texas
23	that, but for the majority, that would be the	23	My Commission Expires: 7/9/2020
24	case.	24	Dated: January 22, 2019
	Page 363		Page 365
1		1	
1 2	MS. APPEL: Okay. That's all I	1 2	INSTRUCTIONS TO WITNESS
3	have. Thank you, Dr. Carson.	3	Dlagge read your densaition ever
4	MS. TINSLEY: I don't have any	4	Please read your deposition over
5	questions.	5	carefully and make any necessary corrections.  You should state the reason in the
6	MS. O'DELL: Okay. Why don't	6	
7	we take a short break.		appropriate space on the errata sheet for any
8	THE VIDEOGRAPHER: Off the	7	corrections that are made.
_	record at 5:37, end of Tape 4.	8	After doing so, please sign the
9 10	(Recess taken, 5:37 p.m. to	9	errata sheet and date it.
10	5:44 p.m.) THE VIDEOCR A PHER: Walte on the	10	You are signing same subject to
11	THE VIDEOGRAPHER: We're on the	11	the changes you have noted on the errata
12	record at 5:44, beginning of Tape 5.	12	sheet, which will be attached to your
13	MS. O'DELL: Dr. Carson, I	13	deposition.
14	don't have any questions, so this will	14	It is imperative that you return
15 16	conclude your deposition.  MR. ZELLERS: Thank you,	15	the original errata sheet to the deposing
16	IVIK ZELLEKS, Luank Voll	16	attorney within thirty (30) days of receipt
		1 77	
17	Doctor.	17	of the deposition transcript by you. If you
18	Doctor. THE VIDEOGRAPHER: Going off	18	fail to do so, the deposition transcript may
18 19	Doctor.  THE VIDEOGRAPHER: Going off the record, 5:44. End of deposition,	18 19	fail to do so, the deposition transcript may be deemed to be accurate and may be used in
18 19 20	Doctor.  THE VIDEOGRAPHER: Going off the record, 5:44. End of deposition, end of Tape 5.	18 19 20	fail to do so, the deposition transcript may
18 19 20 21	Doctor.  THE VIDEOGRAPHER: Going off the record, 5:44. End of deposition, end of Tape 5.  (Proceedings recessed at	18 19 20 21	fail to do so, the deposition transcript may be deemed to be accurate and may be used in
18 19 20 21 22	Doctor. THE VIDEOGRAPHER: Going off the record, 5:44. End of deposition, end of Tape 5. (Proceedings recessed at 5:45 p.m.)	18 19 20 21 22	fail to do so, the deposition transcript may be deemed to be accurate and may be used in
18 19 20 21 22 23	Doctor.  THE VIDEOGRAPHER: Going off the record, 5:44. End of deposition, end of Tape 5.  (Proceedings recessed at	18 19 20 21 22 23	fail to do so, the deposition transcript may be deemed to be accurate and may be used in
18 19 20 21 22	Doctor. THE VIDEOGRAPHER: Going off the record, 5:44. End of deposition, end of Tape 5. (Proceedings recessed at 5:45 p.m.)	18 19 20 21 22	fail to do so, the deposition transcript may be deemed to be accurate and may be used in

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1	ERRATA	1		LAWYER'S NOTES	
2	PAGE LINE CHANGE	2			
3		3	PAGE	LINE	
4	REASON:	4			
5	DEACON.	5 6			
5 7	REASON:	7			
, B	REASON:	8			
9		9			
)	REASON:	10			
1		11			
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3		13			
4	REASON:	14			
5	PEAGON.	15			
5	REASON:	16			
7 3	PEASON:	17			
3 9	REASON:	18 19			
)	REASON:	20			
1	REASON.	21			
2	REASON:	22			
3		23			
4	REASON:	24			
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1	ACKNOWLEDGMENT OF DEPONENT				
2 3					
4	I, ARCH I. "CHIP" CARSON, M.D.,				
	Ph.D., do hereby certify that I have read the				
5	foregoing pages and that the same is a correct transcription of the answers given by				
5	me to the questions therein propounded,				
_	except for the corrections or changes in form				
7	or substance, if any, noted in the attached Errata Sheet.				
3					
9 )					
l					
2	ADCILL HOLLIDH CARGON M.D. PL.D. DATE				
3	ARCH I. "CHIP" CARSON, M.D., Ph.D. DATE				
4					
5	Subscribed and sworn to before me this				
5 7	day of, 20 My commission expires:				
3	commodion expired:				
9					
) 1	Notary Public				
2					
3					
4					

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